NorPower software package for Sound Power detection
Nor1035

NorPower software package
The NorPower software is a complete package for sound power measurements. It includes the required tools for sound power calculations both in free field and in reverberant acoustical environments. The user may choose to set all required calculation parameters manually, or, just pick one from the list of Standards and all parameters will be preset. Report sheets are available in Word or Excel formats, and the software may even control the instruments during the measurement phase using the optional CtrlPower feature.
The ISO 3740 series of Standards
The ISO 3740 series of Standards for detecting the sound power values are currently being revised. Hence, measurement procedures laid down in the current version will be different when the new revised version becomes valid, presumably within 2008. The NorPower type 1035 software package for calculation of the sound power values contains the measurement procedures according to both the old and new ISO 3740 series of Standards.

List of preset Standards
The list of available preset Standards is continuously updated as new Standards are available. The current version includes the following Standards:

- ISO 3740-1996
- ISO 3745-1996
- ISO 3740-2006
- ISO 3745-2006
- ISO 3740-1994
- ISO 3745-1994
- ISO 3740-1998
- ISO 3745-1998
- ISO 3740-2000
- ISO 3745-2000

Frequency range and bandwidth
Most Standards for sound power detection require a frequency range from 100Hz to 10kHz. The filter bandwidth are normally 1/3-octave or 1/1-octave. The user may, however, set these parameters independently if special test conditions require so.

Acoustical environments
The NorPower software performs the calculations based on different acoustical environments. The corresponding corrections are made in accordance with the selected environment which the user may choose in the setup menu. Available environmental corrections are based on Reference source, Room absorption, or Free field (K2=0) calculation procedures.

Measurement Surfaces
The noise source for test may be placed in different measurement surfaces. The calculation of the correct sound power level will be made accordingly. To choose the desired surface, simply click the corresponding figure in the Surface Setup dialogue box, and key-in the corresponding geometric lengths and sizes in the following Geometry Setup dialogue.

Easy user interface
The NorPower is easy to use and offers an unique project overview during all steps of the sound power evaluation process. Thanks to the Project Tree structure showing all measurement files, all result tables and graphical views, the operator may easy switch through the different tables and graphs. Even additional documents such as pictures and project documents may be added to the overall project tree. Of course, the entire set of measurements, tables, graphs and other documents may be stored in one single folder for re-visits at a later date.
Use of existing measurement files
Measurement files from any Norsonic instrument are entered into the calculation by dragging the files directly from the instrument memory using the NorXfer 1020 software package. This software comes free of charge with all Norsonic instruments. Alternatively, old measurement files stored on the hard disc may be used in a similar way, or, the user may enter data manually.

Report sheets
As soon as all relevant data from the microphone positions placed around the source under investigation, for the background noise level, and from the possible reference sound source are entered into the project tree data structure, the NorPower will produce the relevant report sheets (see below). The operator will find both tabular and graphical report sheets containing both the actual measured data as well as the calculated sound power level.

Project data entry
Important project data such as measurement room volume, description of the source, name of the client, etc. are entered directly into the final report sheet. Hence, the operator see on the screen exactly how the final printed report will look like. The actual date is entered manually, and the operator just have to sign the report after printing it out on the PC printer.

Finally, the Test Report may be printed out, even including the logo of the laboratory.
Reference Sound Sources
Any reference sound source, such as the Norsonic Nor261, may be used with the NorPower software package. The calibrated levels from each frequency band are entered manually in the table once, and these levels are automatically stored for easy access on the next sound power project.

Multiplot project comparisons
For comparison of the last measurement with older measurements, the NorPower package offers a Multiplot feature. In a normal graphical view, several sound power spectra may be viewed simultaneously and differences between the tests are easily found. This feature is particularly interesting for product development measurements where the effect of small improvement to product can be evaluated step by step.

CtrlPower measurement control
For easy measurement control, or, when measurement have to be performed repetitively, the NorPower offers an optional measurement control feature named CtrlPower. The operator will then control the entire measurement process directly from the PC. Most Norsonic instruments may be used as remotely controlled measurement units, and the measurement results are automatically transferred to the active project at the end of every single measurement.

Even the Nor265 Microphone Boom may be controlled from the CtrlPower feature.

Ordering information

<table>
<thead>
<tr>
<th>Type No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>Nor1035</td>
<td>NorPower.NorPower. PC-software for calculating and presenting graphically the Sound Power indices according to the measurement Standards in the ISO374x series. Results are based on measurement files from Nor132/131, Nor110, Nor118, Nor121, Nor140, Nor840 or Nor843 instruments which are stored on the PC itself (Nor1020 NorXfer Transfer Software must be ordered separately). Alternatively, Nor118, Nor121, Nor140 or Nor843 results are imported using the Nor1035/3 CtrlPower feature. (Windows XP compatible.) Includes MS-Excel export and multiplot features. (NB: Single user licence using USB-key!!)</td>
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<tr>
<td>Nor1035/03</td>
<td>Opt. 3: CtrlPower. Control module for use with Nor1035 to control the entire measurement procedure in Nor118, Nor121, Nor140 and Nor843 instruments.</td>
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