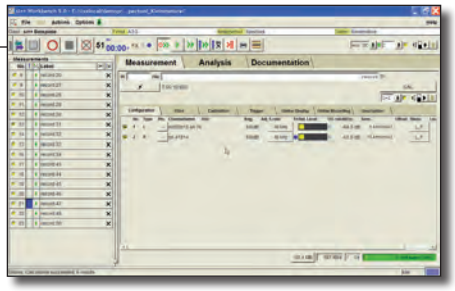
si++Workbench

the direct way

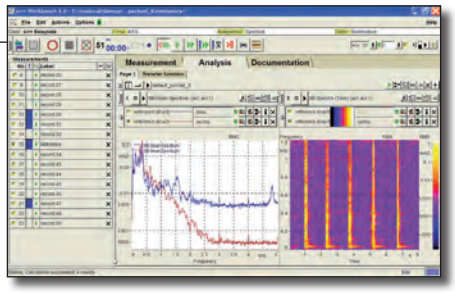
Measurement

minimal familiarization time



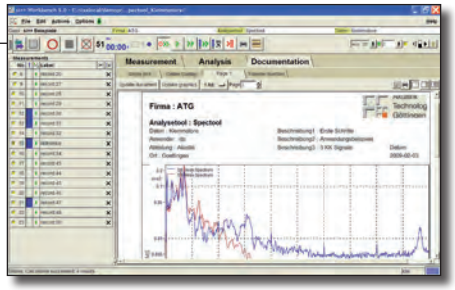
Analysis

optimum versatility



Printing

maximum productivity



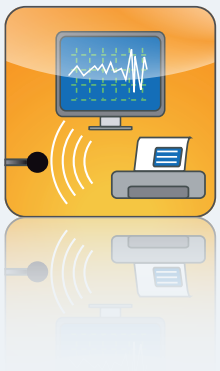
Integrated Software for Acoustic and Vibration Test, Analysis and Documentation. All steps of your daily work are done elegantly with this comfortable tool.

- Measure your subject of interest
- Handle the list of all your records
- Listen to and cut your recordings if needed
- Analyze with one or many of the long list of available functions
- Design your documents
- Print out or send your reports

You can very precisely adjust what you want to analyze and how it should be displayed and reported. The handling on every step is intuitive and simple.

After having made the first measurement and analysis you need only one mouseclick to do the second. The whole range from standardized tests to very specific analysis is covered by this user interface. It includes all the possibilities of si++ **signal analysis** in an easy accessible way.

This unique combination of simple use and open configuration gives you real productivity improvement in testing applications.



Applications

si++**Workbench** is the right choice wherever sound and vibration signals are measured and analyzed.

mobile …

for recordings on site, e.g. in a vehicle.

or stationary …

as the ideal solution for a test bench

for airborne noise …

si++**Workbench** provides everything that you need to analyze airborne sound signals: spectral analysis, order analysis, transfer analysis, sound power measurement and much more.

for vibrations …

si++**Workbench** is as well equipped to analyze structure-borne sound signals or general measurements

for any other signals …

Over 200 signal analysis functions can be integrated into si++**Workbench** for your special application.

SOUNDTEC

si++Workbench

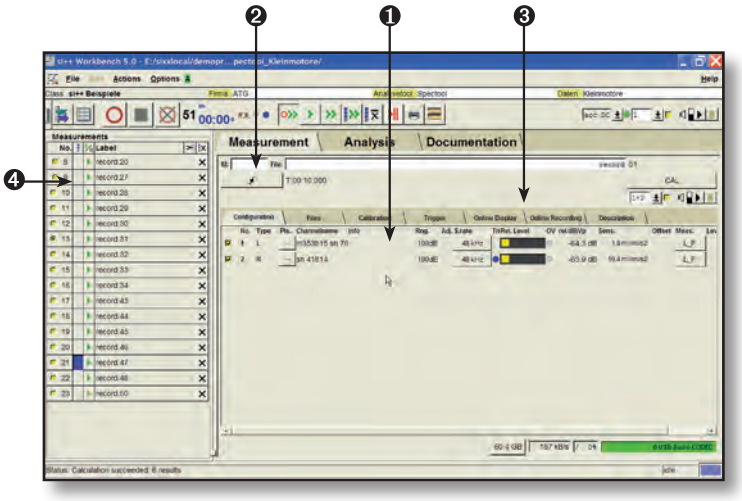
Data acquisition

❶ Set the channel properties. The current measuring range and level are shown in the units of the sensor.

❷ Determine the recording length and set the trigger. You can trigger at level and r.p.m. values.

❸ Select whether you want to save the time data of the recording or the results of a real-time calculation such as third-octave spectra or level. Check the corresponding parameter settings if necessary.

❹ Your recording is chronologically entered in the list of measurements. Here you see an overview of all measurements and make selections for processing and averaging.



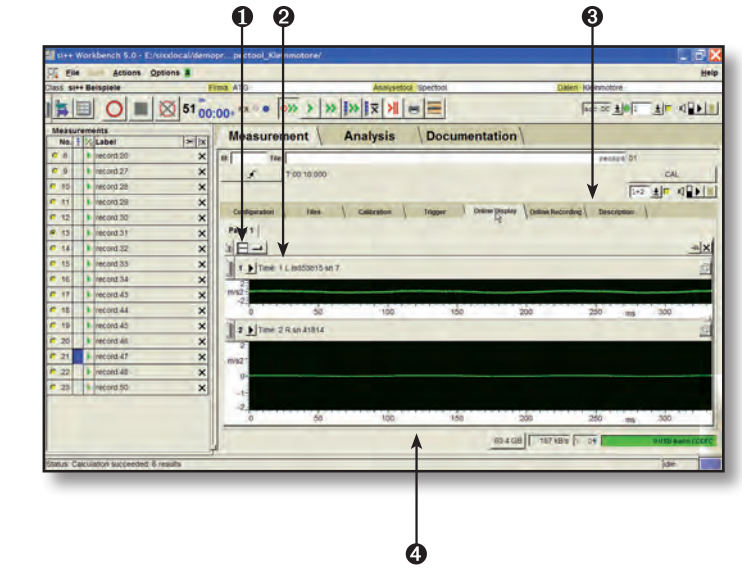
Real-time display

❶ Configure the real-time display. Divide up the page in the best way for your presentation.

❷ Select the desired function in each display field, e.g. time data, level or third-octave spectra.

❸ Set the parameters for the calculations.

❹ During the recording, the selected analyses appear in real time.



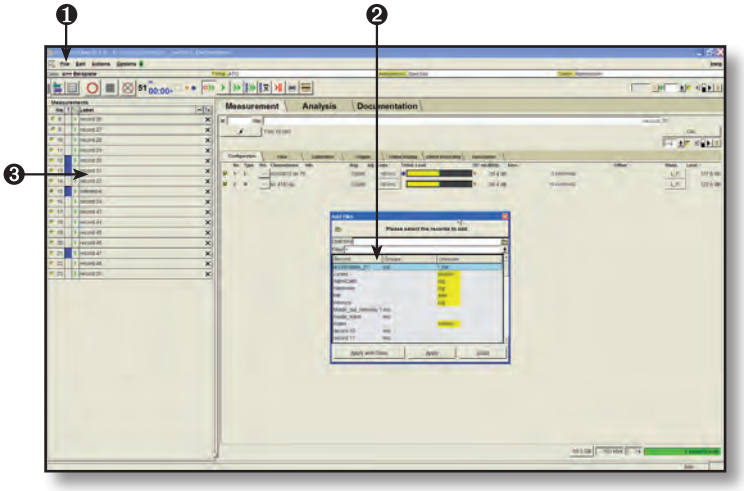
Data import

This is how you transfer recordings that have already been made with another software into **si++Workbench:**

❶ Create a new measurement with
File -> Add Files.

❷ Assign your files to the functions in **si++Workbench**

❸ Your data sets are automatically added to the list of measurements. If your data is not available in **si++** format, but in another format (e.g. wav), an automatic conversion can be activated.



Analysis

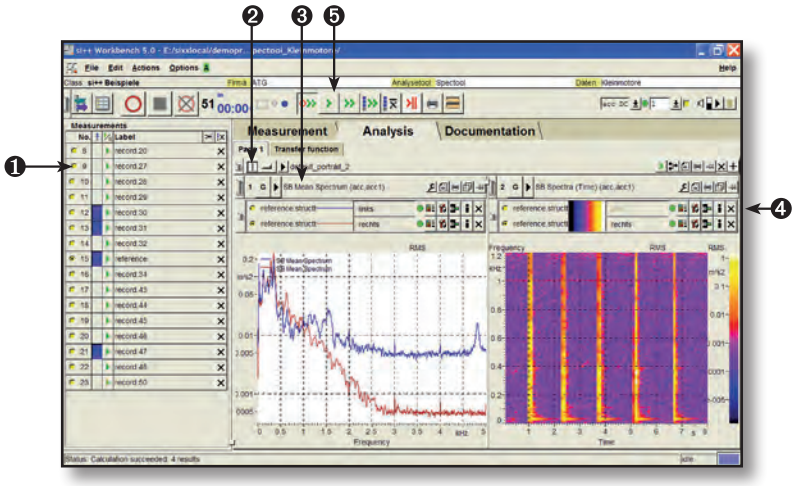
❶ Select one or more data sets in the list of measurements. The last data set that was added is automatically selected.

❷ Configure the analysis page. Divide up the page in the best way for your presentations. Several result pages can be set up if necessary.

❸ Select the analysis directly in each display field, e.g. Level and Orders runup.

❹ Set the parameters for the calculations. The relevant parameters can be accessed directly for each function.

❺ Start the analysis for a recording. This can also be done automatically after a new recording.

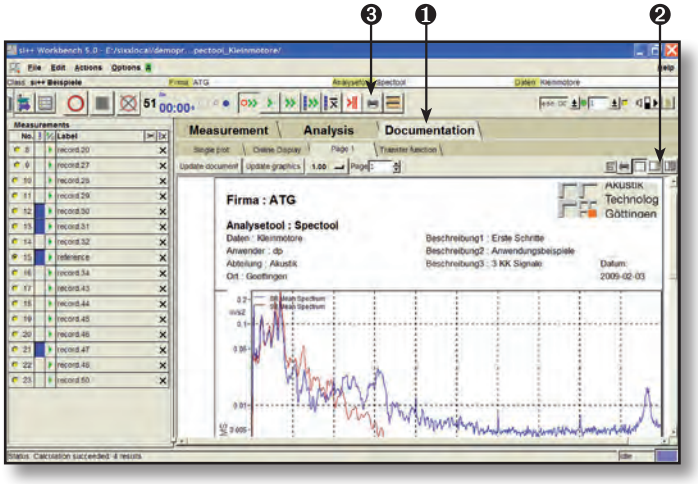


Printing

❶ To print, you go from the analysis to the documentation page. On this page, your results are immediately displayed with a suitable layout as a print preview, i.e. your print-out will look the exactly the same as the presentation on this page.

❷ If necessary, you can change the presentation with the layout editor. You can save your changes as a new layout.

❸ You now print out your documentation. It is also possible to start the printing directly from the analysis page without going to the documentation page.



- **si++Workbench** contains the **si++** documentation module **si doc2**.
- In **si doc2** you can integrate further information together with your plots in predesigned layouts, or you can define your own layouts.
- In Windows® you can also export your graphics via the Windows® clipboard to other applications, such as Word®.

si++Workbench

The multi-channel signal analysis system in summary:

Frontends & recorders

si++Workbench is ideally suited for use with the mobile systems:

- **si++Voyager 4+**
- **si++Voyager DATaRec4©**
- **si++Voyager 36**
- **si++ Voyager 144**

si++Workbench supports the frontends and recorders from Zodiac Aerospace (formerly HEIM Systems) and SINUS Messtechnik GmbH as well as data acquisition via analog and digital sound cards in a PC. Additionally there is a low-priced, four-channel version.

Real-time analysis

The following analysis functions are available in the real-time display during recording:

- Time signal
- Level course
- Sound power level
- Order level
- Third-octave spectra
- Sound power third octave
- FFT spectra
- Order spectra

Analysis

The following analyses are included in the available calculation rules of **si++Workbench**, in addition to many others:

Spectral analysis for airborne sound with:

- Spectrogram
- Mean spectrum
- Level over time
- Mean level
- Third-octave spectrogram
- Mean third octaves
- Articulation index

Order analysis with:

- R.p.m. display and correction options for bad pulse tracks
- Total level & selected orders over r.p.m.
- Order spectrum over r.p.m.
- Mean order spectrum over r.p.m.
- Third-octave order spectrum
- Mean third-octave order spectrum
- Spectrogram over r.p.m.
- Level over r.p.m.

Psychoacoustics with:

- Loudness
- Specific loudness
- Sharpness
- Roughness
- Fluctuation strength
- Human-ear filter bank
- Modulation analysis

Sound power measurement with:

- Sound power over time
- Mean sound power
- Sound power in third octaves
- Mean sound power in third octaves
- Third octaves over time
- Mean third-octave spectra
- K2 calculation

Averaging and calculations with analysis results:

- Averaging of results
- Determination of minimum and maximum values

You will also find a number of analyses for calculating transfer functions, for spectral analysis of structure-borne sound and for sound-intensity measurement. The number of available functions in **si++Workbench** is continually increasing - ask us.

In **si++Workbench**, the entire range of sound and vibration analysis modules of si++ is furthermore available to define new calculation rules. Combining the over 200 commands from the si++ toolbox allows you to put together a made-to-measure analysis for practically any task.

Monitoring

In **si++Workbench** you can monitor your recordings in their entirety or in parts at any time.

Print-outs:

You can print out your results from **si++Workbench** on all printers. You can do this either by using the supplied layouts or designing your own layouts with the new WYSIWYG layout editor. In addition, you can save entire pages or individual images or copy your images to clipboard. This allows you to transfer your results to other applications without any problem, e.g. in order to write a report with MS-Word®.

Project management

si++Workbench works together with the si++ project management. This allows you to have your data ready at hand at all times. Naturally, you can also work without the project management.

Operating systems

Windows 2000® (standard PC's)
Windows XP®
Windows Vista®
Windows 7®
Linux®

Some of the above-mentioned functions require special licenses.

Presented by:

SOUNDTEC

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