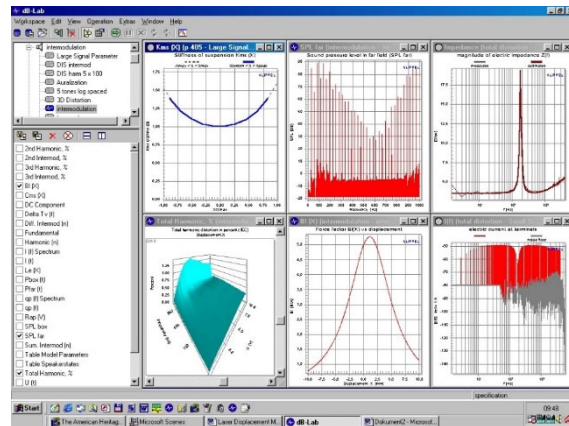


FEATURES

- Project-oriented Microsoft Windows application
- Hosts measurement and simulation modules
- Common interface for all modules
- HTML report generation
- Editable report templates for print-out and documents
- Keeps all your data in one place
- Scalable database for setups and results
- On-line help
- Export of data and graphics



dB-Lab is the general frame for the computer software modules of the Klippel R&D System. It gives a simple and common environment to control all measurements and simulations and to visualize, store and handle even large amounts of data.

All of the user input, setup parameters and results are stored in a database which makes it easy to share, transfer and access information. dB-Lab provides convenient tools to organize and maintain your data.

The work within dB-Lab is project oriented. The user may conveniently organize his projects in different folders. Customized setups can be saved as templates for other measurements.

The report generator of dB-Lab produces HTML-files that summarize the measurement results in an optimal way. Several standard templates for report generation are provided. They can easily be modified using a web-site editor.

A dB-Lab Viewer is available for free for customers and 3rd parties, giving full access to existing results in the same environment as dB-Lab.

Article number	1000-100; 1000-110
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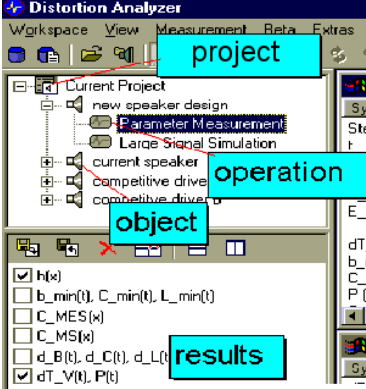
5 Report System 5

6 Patents 5

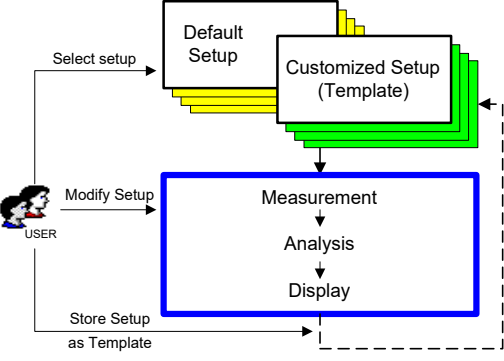
1 System Requirements

Operating System	Microsoft Windows 7, 8 or 10
Basic PC	Intel Core 2 Duo 2.5GHz or equivalent CPU, 4 GiB RAM, 1280 x 800 screen resolution
Recommended PC	Intel Core i5 3GHz or equivalent CPU, 4 GiB RAM, 1920 x 1080 screen resolution These specifications are sufficient for most applications running in dB-Lab. For applications that create or process significant amount of data, a high-end system (Intel Core i7 or equivalent CPU, 64 bit Windows 10, 8 GiB RAM, SSD storage) ensures smooth, efficient and uninterrupted operation.
Disk space	1 GiB plus disk space for result data <i>Remember to implement a backup solution for your data!</i>
Interface	USB 2.0

2 Desktop

Paradigm	<p>The desktop of dB-Lab provides general elements (workspace, operation, objects and results), which enables the user to work efficiently.</p> <ol style="list-style-type: none"> 1. Open your workspace (Project) 2. Create an object to represent the DUT 3. Assign operations (Measurements) to the object 4. Execute operations 5. View, print or export your results <p>All settings, measurement data and results are stored in a database automatically.</p>	
Project	The project is the basis and environment for your work. It allows comparing and viewing multiple objects, even from different folders by using shortcuts.	
Objects	Any device under test (DUT) such as transducer or electrical circuit is represented within dB-Lab as an object and saved under a user-defined name in the database. This object holds all results of operations (measurements) applied to this DUT. The user may save the object as template and use the particular setup for the measurement of other DUTs.	
Operation	The term operation stays for any kind of measurement, analysis, simulation, and calibration or data manipulation to produce, compare, reduce or display data. The operation is applied to a given object and produces results as an output. Most of the measurements require no input data but most of the simulations and data manipulations use the results of other operations as input. The customized operation may be saved as a template to apply all of the setup parameters to other measurements.	
Result	The result is the output of an operation usually in numerical or graphical form. This information may be displayed on the computer, stored in a report file for printing, or exported to other operations and to external data-files (post processing e.g. as Matlab).	

3 Customizing Setup Parameters (R&D System only)

Default Setup Parameters	Each component (software module, result window) uses setup parameters which describe essential a priori information (user input), conditions of the measurement and the kind of graphical presentation of the results. For new objects and operations, the user can choose between the default setup, one of the predefined setup templates, or a user defined setup template.
Save your personal setup	 <p>The advanced user will use most of the time a limited number of favorite settings. Using dB-Lab it is very easy to create customized operations and objects. The user may save a single operation (measurement or simulation) or an object (a collection of measurements assigned to a DUT) as templates. Creating a new object the user may choose between the default setting and the customized setup (template).</p>
Operation Templates	Any basic measurement (LSI, LMP, Aura, ...) or simulation (SIM) may be customized by modifying the setup parameters and saving it as template. Appending a new operation to an object the user can use the default setup or the customized setup.
Object Templates	Applying different measurements to one DUT it is convenient to use object templates. Creating a new object from scratch the user will find a list of all operations of the Klippel R&D System installed on his computer. The user may delete or insert operations according to his particular tasks. After customizing parameters in the input property pages or the result windows the user may save the complete object as a template under a user-defined name. Generating a new object the user may choose between the default setup and the customized setup.

4 Data storage

Concept	dB-Lab allows to keep organizes all measurements and simulations for a project in a single file (.kdbx) containing settings, results, annotations etc. A fully-featured viewer is available free of charge to 3 rd parties, allowing to share results in all detail. Data may be extracted for post processing by a variety of methods, interactively and programmatically.
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5 Report System

<p>Report</p>	<p>Each report is a file in HTML-format (Hypertext Markup Language) and a set of graphic files in JPEG- or PNG-format stored in a subdirectory. It comprises the result of the operation (measurement, simulation)</p> <p>Additional information such as names, comments, logo, etc. can be included in custom report templates.</p> <p>The user may print this file directly or edit this file (change format, add comments). Finally, it may be used as a template for new reports.</p>	
<p>Results</p>	<p>The numerical results are organized in tables. The graphical results are stored in an external JPEG- or PNG files and linked to the report file.</p>	
<p>Generator</p>	<p>The generator produces reports by using the current results (tables, graphics) of the selected operation and a standard or customized report template. The user may add or remove any result from the report.</p>	
<p>Template</p>	<p>Any existing report can be used as a template for new reports. A variety of standard templates are provided for each measurement giving some examples how to use the report system.</p>	
<p>Editor</p>	<p>A standard HTML-editor (e.g. Front-Page, Word, ...) can be used for post-processing, file format conversion and for creating new templates that satisfy personal needs and reflect corporate identity (reloading in dB-Lab is not possible in dB-Lab Standard).</p>	

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6 Patents

<p>Germany</p>	<p>102007005070, 1020120202717, 102014005381.4, 19714199, 4111884.7, 4336608.2, 43340407, 4332804.0, 102013012811, 102013021599.4, 102013000684, 102009033614, 102009033614, P10214407</p>
<p>USA</p>	<p>8,078,433; 14/436,222; 14/683,351; 6,058,195; 5,438,625; 6005952; 5.577.126; 5815585; 5,528,695; 14/499,379; 577,604; 8,964,996; 14/152,556; 12/819,455; 12/819,455; 7,221,167</p>
<p>China</p>	<p>ZL200810092055.4; 201380054458.9; 201510172626.5; 981062849; 2014103769646; 2014107954970; 2014100795121; 201010228820.8; 201010228820.8; 03108708.6</p>
<p>Japan</p>	<p>5364271; 2972708</p>
<p>Europe</p>	<p>13786635.6; 0508392A2</p>
<p>Taiwan</p>	<p>102137485</p>
<p>India</p>	<p>844/MUMNP/2015</p>
<p>GB</p>	<p>2324888</p>
<p>Hong Kong</p>	<p>1020403</p>
<p>Korea</p>	<p>1020140095591</p>

Find explanations for symbols at:

<http://www.klippel.de/know-how/literature.html>

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