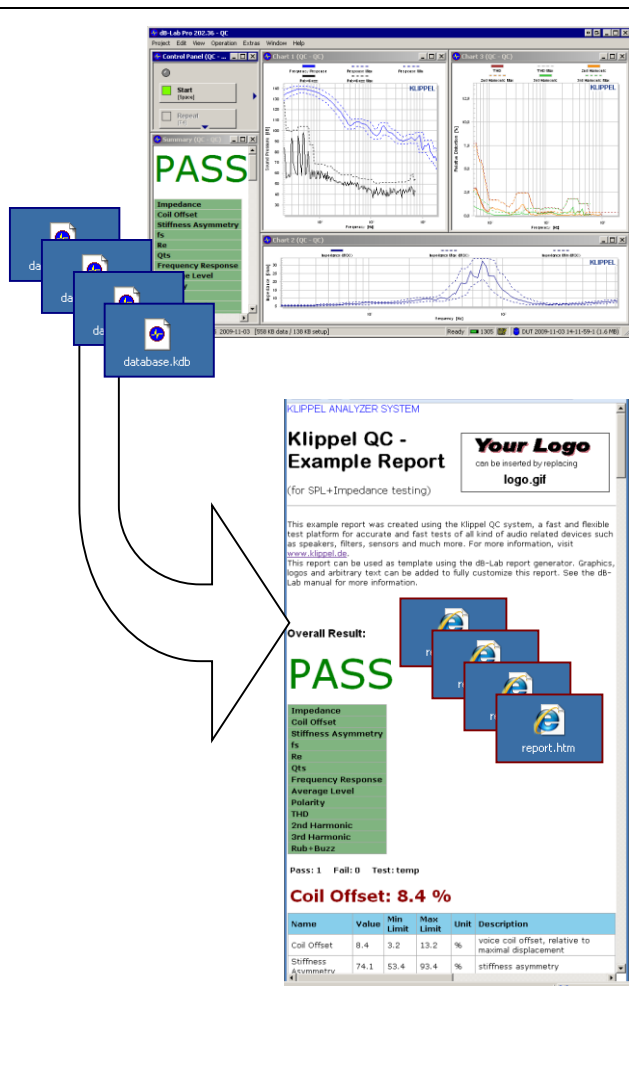


Publishing measured results is important to customers and clients. While the KLIPPEL database contains all information about results and setups in one single file, this format may be not appropriate in some use cases. Using the KLIPPEL software, it is easy and fast to create HTML-templates based on operations or objects within KLIPPEL databases.

If multiple reports are required e.g. from a series of measurements or on a regular basis, the user interactive method of creating a report (opening database, navigating to operation, selecting templates etc.) is time consuming and boring.

Using the Automation Access to the KLIPPEL proprietary databases (\*.kdb{x}), it is possible to generate such reports in an automated way. In this Application Note the access of the data is shown using windows scripting (VBS). This is a simple and open programming language which can be edited and extended easily by the user. The VBS script can be started using a command line. However, a simple batch file is also provided to show the calling syntax for the script. This solution is convenient and extremely flexible at the same time.



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## Interactive Report

### Open Database

If the database is not already open (just after a measurement), double click on any kdb{x}-file to open the database in dB-Lab. Select the object and operation for which a report shall be generated.

QC: Note that for all QC databases there is only one object "QC" in the root folder containing only one operation also labeled "QC". No login is required for creating a report.

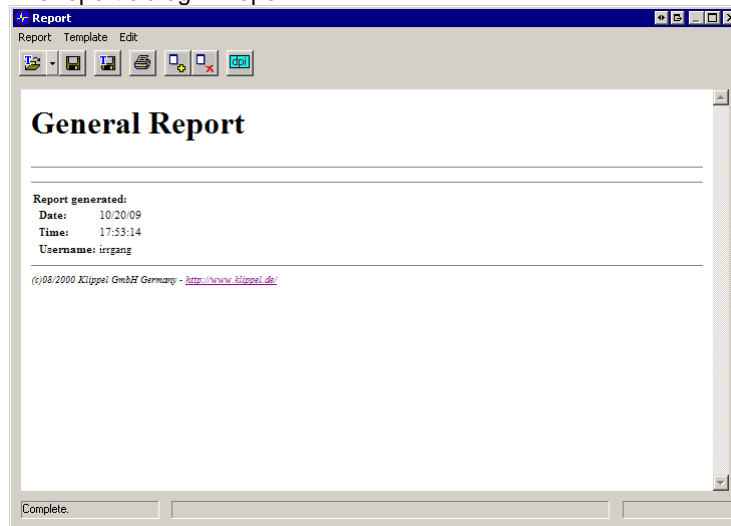
R&D databases usually contain multiple operations in one or more objects / folders.

### Create report

To create a report, select *Project / Report* or click on the report icon:

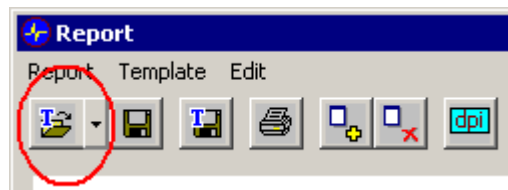


The report dialog will open:



### Select a template

Select *Template / Open* or click on the icon:



to open a template. For most operations generic templates are provided from KLIPPEL.

### Print / Save report

Select *Report / Save as...* or *Print* to publish the report as HTML-file or as printed output (pdf, hard copy).

### Modify Template

Modify the saved HTML-file and load the modified file as template. All measurement results and graphs are replaced, but the modified appearance (text, graphics, pictures etc.) is used from the user modified HTML-file. See also the dB-Lab Manual for more information.

<b>Automated Reports</b>	
<b>Automation</b>	<p>The KLIPPEL Analyzer Software can be controlled via software interface by external applications, such as Visual Basic, C++, C# or Scripting applications.</p> <p>For details see the comprehensive Automation Documentation Package.</p>
<b>Scripting using KLIPPEL Automation</b>	<p>In this Application Note a simple windows scripting program is used to generate reports from KLIPPEL databases. The source code is provided in the Software Package belonging to this Note.</p> <p>The KLIPPEL Automation Software comes with the dB-Lab installation.</p> <p>Note that the KLIPPEL Viewer Software and the dB-Lab Lite version cannot be used. Use the installation CD for setup.</p> <p>Scripts run without compilation, so no further software tools are required.</p> <p>As the name says, scripts do not provide a nice graphical user interface. If this is required, use the script as template and implement your project using one of the high-level programming languages.</p>
<b>Database Extension</b>	<p>Please note that the KLIPPEL database extension is depending on the used dB-Lab version. From dB-Lab v206 the extension is ".kdbx" – earlier versions use ".kdb". The examples deliver both versions. The batch file handles both database versions.</p>

<b>Example 1: Process one database</b>	
<b>Target</b>	<p>A single operation in a database shall be processed. QC databases typically contain just one operation while R&amp;D databases may contain multiple operations.</p> <p>The path to the database has to be specified on calling the script <i>CreateReports.bat</i></p>
<b>Run the example</b>	<ul style="list-style-type: none"> <li>○ Download and extract the software package <i>AN_44_Creating_Automated_Reports-Software.zip</i>.</li> <li>○ Navigate to the folder <i>Examples</i>.</li> <li>○ Start the batch file <i>Example1.bat</i></li> <li>○ In the command line window the task of the script is shown. Press any key to execute</li> <li>○ dB-Lab is now called and the report is generated.</li> <li>○ The shell window is closed automatically, and the report can be opened using a web browser.</li> </ul>
<b>Modify the example</b>	<p>Using a simple text editor (e.g. Notepad), you may change:</p> <ul style="list-style-type: none"> <li>○ Reported databases</li> <li>○ Add more report commands</li> <li>○ usage of command line parameter to invoke names</li> <li>○ switching on/ off the viewing of the completed result</li> <li>○ creation of sequences of report generations</li> <li>○ Integrate a message box.</li> </ul>

## Example 2: Process folder of databases

**Target** A folder with a set of databases shall be processed.  
For each database a report with the same name shall be generated and stored in a subfolder called "reports".

**Run the example**

- Start the batch file *Example2.bat*.
- A command line window will open. The task of the script is shown. Press any key to execute.
- dB-Lab is now called and the report is generated. This procedure will be repeated for every database.
- The shell window is closed automatically after all reports were generated.
- Navigate to the output folder: *Databases\reports\* and open one HTML-file to verify the result.

## Example 3: Process QC test folder

**Target** In this example a typical QC test folder is used. In such a folder databases are stored from QC measurements in the *Log* folder. Each database contains one measurement.  
For each log data a report with the same name shall be generated and stored in a subfolder called "reports".

**Run the example**

- Start the batch file *Example3.bat*.
- The batch command is shown. Specifying the name of the QC test folder is sufficient for reporting test log data.
- After pressing any key reports will be generated.
- Verify the result at *MyWoofers/Log/reports*

## Create own automated reports

**Work with the script** The script *CreateReports.bat* as shown in the three examples works with QC test folders, a single specified database and a folder including databases.  
Create your personal report templates and integrate them just by adapting the variable *reportTemplate* in *CreateReports.bat* at line five  
By running the script without any test folder parameter (e.g. double clicking) the script prompts the user to input the name of the data to report in the command line. This function is integrated to process manual tasks, also.

**Modify the example** Using a simple text editor (e.g. Notepad) you may personalize the examples to your needs:

- Add your own report commands, line by line.
- Create automatic report sequences
- Specify scope of the tree, where databases are searched.
- Open created reports automatically.
- Personalize every report with reportTemplates
- Integrate a message box with necessary information.

<b>Software</b>	
<b>dB-Lab Pro</b>	For QC3 and eariler versions, a dB-Lab Pro license is required. For QC4 and higher, no additional license is required.
<b>Windows script</b>	<p>If not already installed on your system, the windows scripting can be downloaded from the Microsoft website.</p> <p>Open the doc folder and check the web site links for the actual software and a documentation package.</p> <p>Please note that the Automation interface needs to be run out of a 32 bit environment . If the operating system is 64 bit, SysWoW64's version of cscript needs to be used to run the VBS script in 32 bit mode. This check is performed in the batch files <i>Example1_GetReport_kdb{x}.bat</i>, resp <i>Example2_GetReports_kdb{x}.bat</i>.</p> <p>In a standard windows system, the two versions of <i>cscript.exe</i> are located at:  <i>C:\Windows\System32\cscript.exe</i> (32 bit)  <i>C:\Windows\SysWoW64\cscript.exe</i> (emulates 32 bit on 64 bit systems)</p>
<b>AN_44_Creating_Automated_Reports-Software.zip</b>	<p>Two examples are preconfigured to be used with this Application Note.</p> <p><b>Note:</b> The software is NOT to be used in customer applications as it is. Additional parameter checks and tests should be used to make the solution robust and safe. However, it is beyond the scope of this Application Note to provide a complete solution. The software included is intended to be used as a starting point for customer specific solutions.</p>
<b>dB-Lab Manual</b>	You will find more information on the Report System in the dB-Lab Manual.
<b>Automation Documentation Package</b>	Detailed information about the KLIPPEL Automation Interface including examples using several programming languages are provided.

<b>Disclaimer</b>	
<p>The software provided with this Application Note is NOT to be used in customer applications as it is. Additional parameter checks and tests should be used to make the solution robust and safe. However, it is beyond the scope of this Application Note to provide a complete solution. The software included is intended to be used as a starting point for customer specific solutions.</p>	

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