



Quantum Blue[®] Reader QB Soft

User Manual

V02; 08/2013

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1 Introduction

Policy Statement

It is the policy of BÜHLMANN Laboratories AG to improve products as new techniques and components become available. BÜHLMANN Laboratories AG reserves the right to change specifications at any time. In an effort to produce useful and appropriate documentation, we appreciate your comments on this user manual. Please contact BÜHLMANN Laboratories AG.

Version Management

This document is the *QB Soft User Manual*.

Document number: V02

Document version: 08/2013

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Printed in Switzerland

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2 General Product Description

Easy to use, comprehensive Software for the user of the BÜHLMANN Quantum Blue® Reader, offering:

- Control of the Quantum Blue® Reader via PC
- Multi-language user interface
- Status display of important Quantum Blue® Reader functions
- Printing a comprehensive test report
- Archiving of test data stored in the Quantum Blue® Reader or the QB Soft Software
- Management of test data stored in the Quantum Blue® Reader or the QB Soft Software
- Printing of all measured (and stored) test data
- Administration of Test Methods and Users in the Quantum Blue® Reader.

The QB Soft Software is designed for a typical workflow in a diagnostic laboratory, including maintenance, administration and archiving and printing of test data of the Quantum Blue® Reader. For example, a simple tabular structure presents all necessary functions and all kinds test data and conditions within one simple interface.

3 System Requirements

The installation of the software is very simple, straightforward and can be carried out on:

- Windows® XP ServicePack 1 or higher, Windows® Vista, Windows® 7
- Installed .NET Framework (V2.0) and current Windows® Installer (V3.1)
- Intel compatible PC with 1GHz processor and a minimum of 512MB RAM
- 100 MB available memory on the hard disc
- CD-ROM drive
- Monitor with a minimum resolution of 1024 x 768

4 Installing the QB Soft Software and connecting with the Quantum Blue[®] Reader

4.1 Installation of the QB Soft Software

Insert the CD-ROM.

Open the CD-ROM in the File Explorer.

Start “setup.exe” from the “Software\QB Soft” directory.

After successful installation of the software the QB Soft icon will appear on the desktop.

4.2 Connecting the Quantum Blue[®] Reader

Connect the Quantum Blue[®] Reader to the PC via USB cable (for USB driver installation, please refer to chapter 6 or to the User Manual of the Quantum Blue[®] Reader).

Press the ENTER button of Quantum Blue[®] Reader for three seconds to start the reader.

Wait for completion of automatic self-test and self-calibration.

4.3 Running the Quantum Blue[®] Reader with QB Soft

Start QB Soft Software by double-clicking the QB Soft icon.

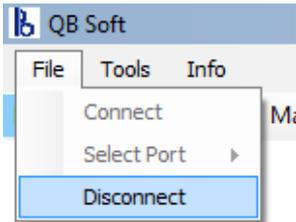
Click on the menu item “File” and then on item “Connect”.

5 Overview of QB Soft Software

5.1 Menu Bar

The menu bar contains three menu groups, “File”, “Tools” and “Info”.

5.1.1 File

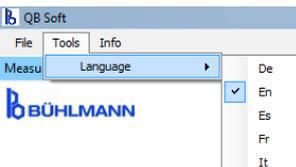


Connect: Establish connection with the Quantum Blue® Reader. After starting the software connection is automatically established, if the Quantum Blue® Reader is connected to the PC and switched on.

Select Port: If the Quantum Blue® Reader is not connected automatically after starting the software, it may be necessary to select the relevant COM port for manual connection.

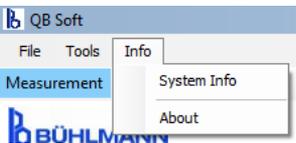
Disconnect: Close the connection between QB Soft Software and the Quantum Blue® Reader.

5.1.2 Tools



Language: This is used to select the language setting for the entire user interface of the QB Soft Software. Current offerings are German, English, Spanish, French and Italian. After having chosen the required language, the QB Soft software must be closed and re-started again.

5.1.3 Info



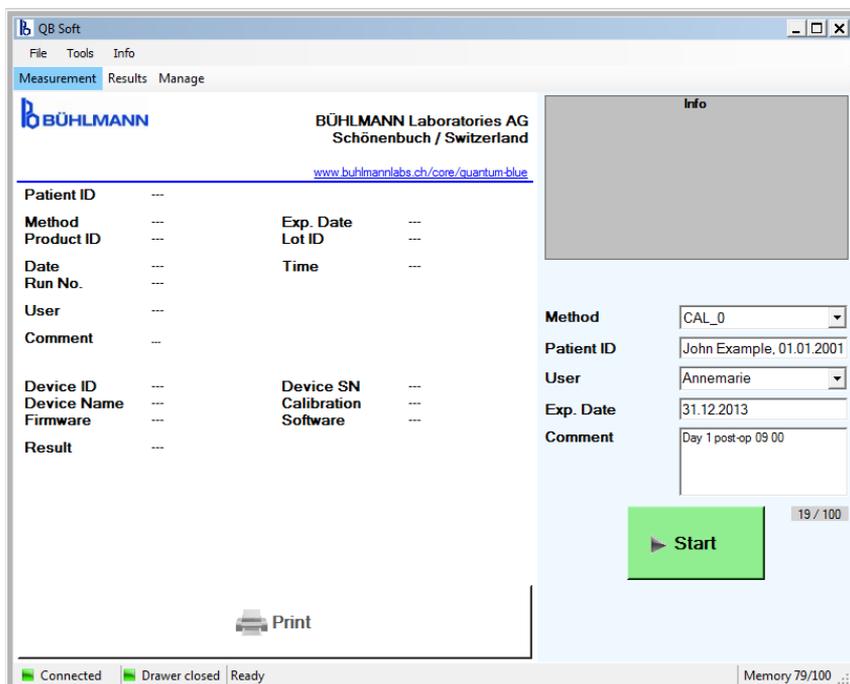
System Info: Displays information about the QB Soft Software and the Quantum Blue® Reader connected. Note that clicking on “Copy” copies the information to the Windows Clipboard.

About: Displays information about the QB Soft software ID, software version and manufacturer.

5.2 Measurement

Click on “Measurement” to perform a test run using the QB Soft Software. This function allows the user to select a Test Method stored on the Quantum Blue® Reader and to scan a test cassette.

The user has to enter a Patient ID and to select a User ID before the scanning of the test cassette can be started. Additionally, the user can enter Expiry Date information of the test (cassette) and add some Comments.



The system is ready for measurement, if the status bar at the bottom of the screen shows “Connected”, “Drawer Closed” and “Ready”. Also displayed in the status bar is the memory status of the Quantum Blue® Reader. This example shows that 79 test results are currently stored in the memory of the reader (80 sets of test results can be stored in total, although a memory capacity of 100 is indicated).

Please note that a test measurement performed with the QB Soft will not be saved to the Quantum Blue[®] Reader, but will automatically be saved into the PC Backup (see also chapter 5.3.2).

The user-accessible and/or –editable functions are:

Method	<input type="text" value="CAL_0"/>
	<ul style="list-style-type: none">CAL_0CAL_720Calpr. Extended

This drop-down list box displays the Test Methods which are stored on the Quantum Blue[®] Reader. Select the Test Method to be run.

Patient ID	<input type="text" value="John Example"/>
-------------------	---

This is a user-editable text box which is used to add a Patient ID to the results.

User	<input type="text" value="Annemarie"/>
	<ul style="list-style-type: none">HanneloreAnnemarieHans-GeorgFridolinHeinzEgonJohanSiegfried

This drop-down list box displays the Users who are registered on the Quantum Blue[®] Reader. Select the corresponding User ID.

Exp. Date	<input type="text" value="31.12.2013"/>
------------------	---

This is a user-editable text box which is used to add the Expiration Date of the test reagent(s) to the results.

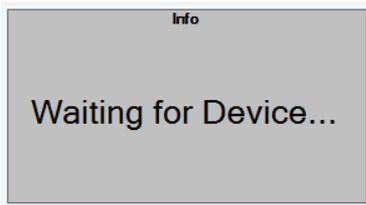
Comment	<input type="text" value="Day 1 post-op 09 00"/>
----------------	--

This is a user-editable text box which is used to add Comments to the results.



Start the test measurement (scanning process) on Quantum Blue[®] Reader with the QB Soft Software. During the measurement the function of the “Start” button changes to a “Stop” function, so that the scanning (and incubation) process can be interrupted at any time. Note that the “Start” button is enabled only when all of the user entry items (at least the Method, Patient ID and User ID) are selected.





The grey “Info” box describes the current status of the Quantum Blue® Reader while a test run (measurement) is performed.

5.2.1 Result Display

After completion of the measurement detailed results, the instrument settings, the operator (user), etc are displayed in a printable test report as shown:

The screenshot shows the QB Soft software interface. At the top, there is a menu bar with "File", "Tools", and "Info". Below the menu bar, there are tabs for "Measurement", "Results", and "Manage". The main area is divided into several sections:

- Header:** BÜHLMANN logo and "BÜHLMANN Laboratories AG Schönenbuch / Switzerland" with the website www.buhlmannlabs.ch/core/quantum-blue.
- Patient Information:** Patient ID: John Example; Method: CAL_0; Product ID: LF-CAL; Date: 23.04.2013; Run No.: 658; User: Annemarie; Comment: Day 1 post-op 09 00.
- Device Information:** Device ID: ESLF35-MB-4501; Device Name: Quantum Blue®; Firmware: V 2.2.17; Device SN: 1011; Calibration: OK; Software: 1.0.13.0.
- Result:** 39 µg/g.
- Table:**

Test Parameter	Test Validation	Unit	Raw Data	Threshold	Peak Start [mm]	Peak End [mm]	Peak Maximum [mm]
Control ...	VALID	mV	1432.31	800.00	41.96	45.16	43.60
Test Line	VALID	mV	604.15	1800.00	50.44	53.64	52.08
T/C Ratio	VALID		0.42	1.80	50.44	53.64	52.08
- Info Box:** A grey box on the right side of the interface showing "Measurement finished".
- Form Fields:** Method (CAL_0), Patient ID (redacted), User (Annemarie), Exp. Date (31.12.2013), Comment (Day 1 post-op 09 00).
- Buttons:** A "Start" button with a play icon.
- Print Button:** A "Print" button with a printer icon.
- Status Bar:** Shows "Connected", "Drawer closed", "Ready", and "Memory 79/100".

Clicking the “Print” button allows the printing of the detailed results on the default Windows® printer.

5.3 Results

The detailed test results are listed in result tables as shown below. These result tables are used to view, store, up/download, print and manage test results saved either on the Quantum Blue® Reader or in the PC Backup.

5.3.1 Results on Device (Quantum Blue® Reader)

This table displays the results which are stored on the Quantum Blue® Reader. By choosing the item “On Device” and clicking the button “Load Results from Device” the results are displayed in the table as shown:

The screenshot shows the QB Soft software interface. The main window displays a table of test results stored on the device. The table has the following columns: Run No., Patient ID, Method, Lot ID, Result, Date, Time, Product ID, User, Calibration, and Device ID. The results are as follows:

Run No.	Patient ID	Method	Lot ID	Result	Date	Time	Product ID	User	Calibration	Device ID
594	0	CHR_0	AAA	725 µg/g	28.03.2...	11:59:48	LF-CHR	User01	OK	ESLF35-N
596	0	Calpr. Exten...	BBB	105 µg/g	28.03.2...	12:10:22	LF-CALE	User01	OK	ESLF35-N
599	0	CHR_0	AAA	725 µg/g	28.03.2...	12:19:46	LF-CHR	User01	OK	ESLF35-N
619	0	CHR_0	AAA	527 µg/g	04.04.2...	09:34:58	LF-CHR	User01	OK	ESLF35-N
621	0	Calpr. Exten...	BBB	69 µg/g	04.04.2...	04.04.2013	LF-CALE	User01	OK	ESLF35-N
622	0	Calpr. Exten...	BBB	69 µg/g	04.04.2...	10:35:00	LF-CALE	User01	OK	ESLF35-N
623	0	Calpr. Exten...	BBB	69 µg/g	04.04.2...	15:23:43	LF-CALE	User01	OK	ESLF35-N
624	0	Calpr. Exten...	BBB	68 µg/g	10.04.2...	16:45:43	LF-CALE	User01	OK	ESLF35-N
627	0	Calpr. Exten...	BBB	68 µg/g	17.04.2...	12:53:35	LF-CALE	User01	OK	ESLF35-N
628	0	Calpr. Exten...	BBB	68 µg/g	17.04.2...	12:56:28	LF-CALE	User01	OK	ESLF35-N

Below the table, there is a section for the 'Last selected Test Run' (Amount: 4) with a 'Comment' field. The table shows the following data:

Test Parameter	Test Validation	Unit	Raw Data	Threshold
Control Line	VALID	mV	1432.90	
Test Line	VALID	mV	604.14	

The interface also includes several action buttons: 'Load Results from Device', 'Delete selected Results from Device', 'Save selected Results in the PC Backup', 'Print selected Results', 'Save selected Results in a Folder', and 'Save selected Results as a CSV Table'. The status bar at the bottom indicates 'Connected', 'Drawer closed', 'Ready', and 'Memory 79/100'.



Unselect all results in the table

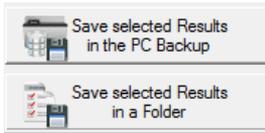


Select all results in the table



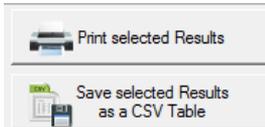
Load all results from the Quantum Blue® Reader

Delete selected results from the Quantum Blue® Reader



Save selected results in the PC backup*

Save selected results into a folder of choice



Print selected results with the default Windows® printer

Save selected results as a CSV file

* Selected results will be saved into “C:\Dokuments and Settings\All Users\Application Data\LFSuite\ Backup” or “C:\ProgramData\LFSuite\Backup” or into “C:\...\LFSuite\ Backup” (the exact location depends on the Windows® operating system version and your personal computer settings).

5.3.2 Results in the PC Backup

The table shown displays the results which are stored in the PC Backup

Test Results stored in PC Backup (Amount: 45)

Run No.	Patient ID	Method (Test Name)	Lot ID	Result	Date	Time	Product ID	User	Calibration	RFID
638	Jacky	Calpr. Exten...	BBB	68 µg/g	18.04.2...	14:21:10	LF-CALE	MU	OK	
639	Jacky	Calpr. Exten...	BBB	69 µg/g	18.04.2...	15:03:59	LF-CALE	MS	OK	
655	John Examp...	CAL_0	0001	39 µg/g	23.04.2...	09:59:53	LF-CAL	Annem...	OK	
658	John Example	CAL_0	0001	39 µg/g	23.04.2...	13:47:36	LF-CAL	Annem...	OK	
635	it	Calpr. Exten...	BBB	69 µg/g	18.04.2...	13:37:35	LF-CALE	SK	OK	
653	it	CAL_0	0001	39 µg/g	22.04.2...	16:36:22	LF-CAL	MP	OK	
640	tz	Calpr. Exten...	BBB	69 µg/g	18.04.2...	15:05:08	LF-CALE	MS	OK	
651	we	CAL_0	0001	39 µg/g	22.04.2...	10:38:14	LF-CAL	MP	OK	
637	zu	Calpr. Exten...	BBB	69 µg/g	18.04.2...	13:40:08	LF-CALE	SK	OK	

Last selected Test Run (Amount: 4)

Test Parameter	Test Validation	Unit	Raw Data	Threshold
Control Line	VALID	mV	1431.66	800.00
Test Line	VALID	mV	603.97	1800.00

Comment
Day 1 post-op 09 00

Buttons: Load Result Files from Backup Folder, Delete selected Results from Backup Folder, Print selected Results, Save selected Results in a Folder, Save selected Results as a CSV Table.

Status: Connected, Drawer closed, Ready. Memory 79/100

folder.

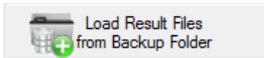
By choosing the item “In PC Backup” the results stored in the backup folder are automatically displayed. As long as the result files are not deleted from the PC backup, they remain stored and will be displayed each time the item “In PC Backup” is selected.



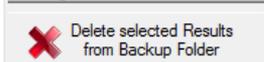
Unselect all results in the table



Select all results in the table



Load results from PC backup



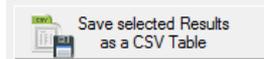
Delete selected results in the PC backup folder*



Save selected results into a folder of choice



Print selected results with the default Windows® printer

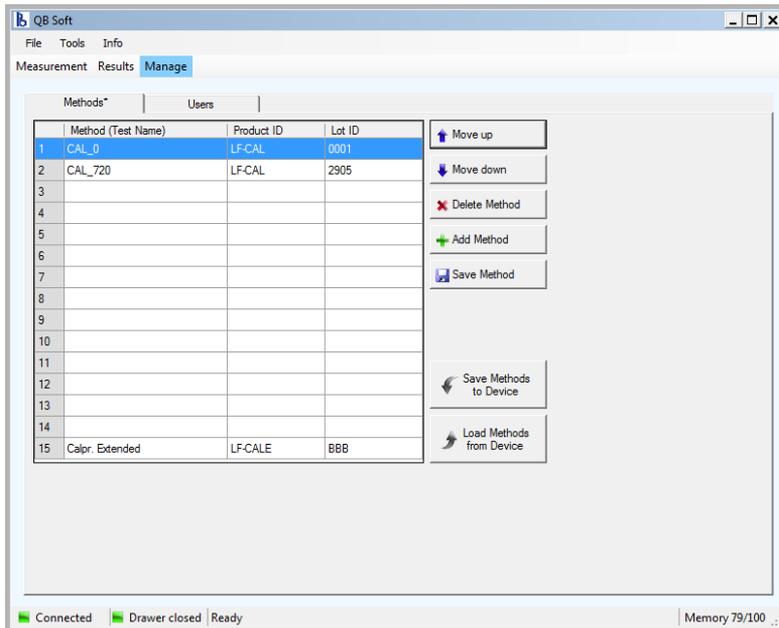


Save selected results as a CSV file

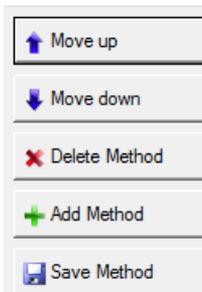
* Selected results will be saved into “C:\Dokumente und Settings\All Users\Application Data\LFSuite\ Backup” or “C:\ProgramData\LFSuite\Backup” or into “C:\..\LFSuite\ Backup” (the exact location depends on the Windows® operating system version and your personal computer settings)

5.4 Manage

This function is used for the administration of the Test Methods and User IDs. These can be transferred to and uploaded from the Quantum Blue® Reader.



5.4.1 Manage Test Methods



Move the selected Method upwards in the list

Move the selected Method downwards in the list

Delete the selected Method from the list

Add a Method file to the list from a PC folder

Save a Method from the list as a file in a folder on the PC

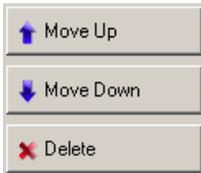
Attention: All currently stored Methods will be overwritten while saving a fresh list of methods!! If you want to add just ONE new method to the

existing Methods on the Quantum Blue® Reader, first load all Methods from the Device, the Quantum Blue® Reader, then add the new method to a free space (line) in the method list, and finally save the Method list containing all Methods to the Device, the Quantum Blue® Reader, again.

5.4.2 Manage User IDs

	User
1	Anno
2	Bjorn
3	Christina
4	Dirk
5	Elena
6	
7	

Editable User ID table. Each User ID can hold up to 10 characters.



Move the selected User ID upwards in the list

Move the selected User ID downwards in the list

Delete the selected User ID from the list



Save the entire list of all User IDs to the Device, the Quantum Blue® Reader.

Load the entire list of all User IDs from the Device, the Quantum Blue® Reader.

Attention: All currently stored User IDs will be overwritten while saving a fresh list of user IDs!! If you want to add just ONE new User ID to the existing Users on the Quantum Blue® Reader, first load all User IDs from the Device, the Quantum Blue® Reader, then add the new User ID to a free space (line) in the users list, and finally save the users list containing all User IDs to the Device, the Quantum Blue® Reader, again.

6 USB Device Driver Installation

The exact sequence and appearance of the installation procedure depends on the version of Microsoft Windows®.

The operating system must provide full USB support.

Ensure that you have sufficient rights for the installation of the drivers (e.g. administrator rights).

If problems should arise during installation, you can de-install the current USB device driver using the Windows® control panel.

Installation can be re-started by re-connecting the USB connector.

6.1 USB Device Driver installation for Windows® XP

6.1.1 First Steps

Insert the CD-ROM into the CD-ROM drive.

Copy the folder 'Driver' to the computer's desktop

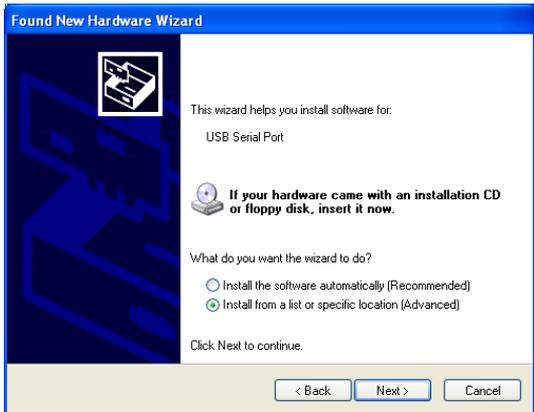
Connect the Quantum Blue® Reader with the USB cable.

Windows® automatically detects the new USB device. The “New Hardware” assistant appears.

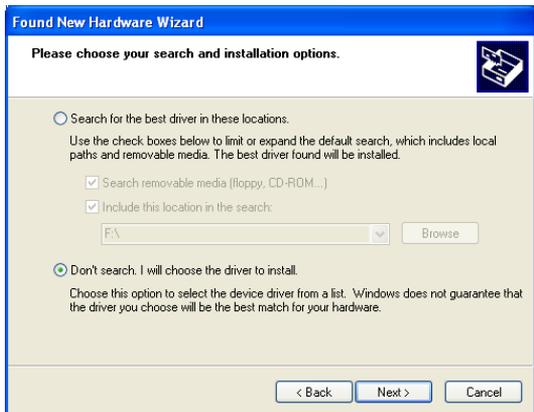
6.1.2 Installation of the USB device driver



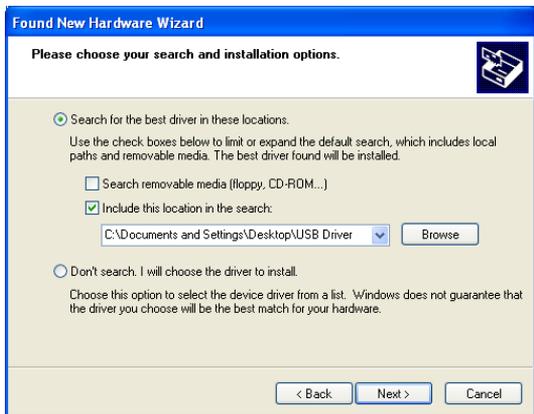
Select the last button “No, not this time” to ignore a connection with Windows Update and press “Next”.



Select the option “Install from a list or specific location” and press “Next”.



Select the option “Don't search, I will choose the driver to install” and press “Next”.

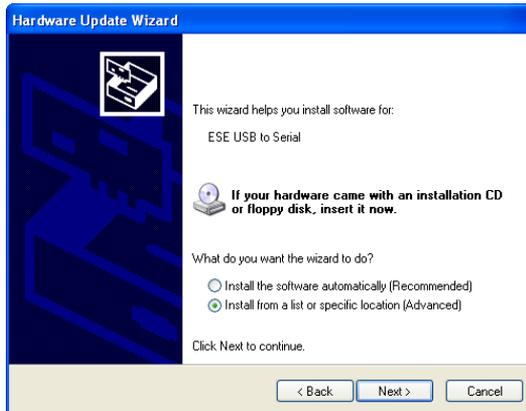


Press the “Browse” button to locate the USB Driver folder on the desktop or on the CD-ROM provided and press “Next”.

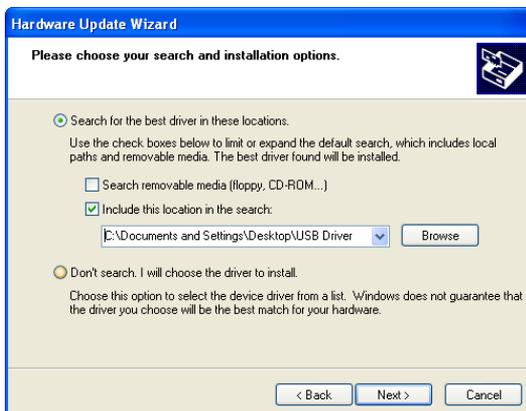
6.1.3 Installation of the USB virtual COM Port



Immediately after the installation of the USB device driver the installation of the virtual COM Port will be initiated. Select the last button “No, not this time” and press “Next”.



Select the option “Install from a list or specific location” and press “Next”.



Click the “Browse” button to locate the USB Driver folder on the desktop or on the CD-ROM provided and press “Next”.



Confirm the next screen by pressing the button “Continue Anyway”.



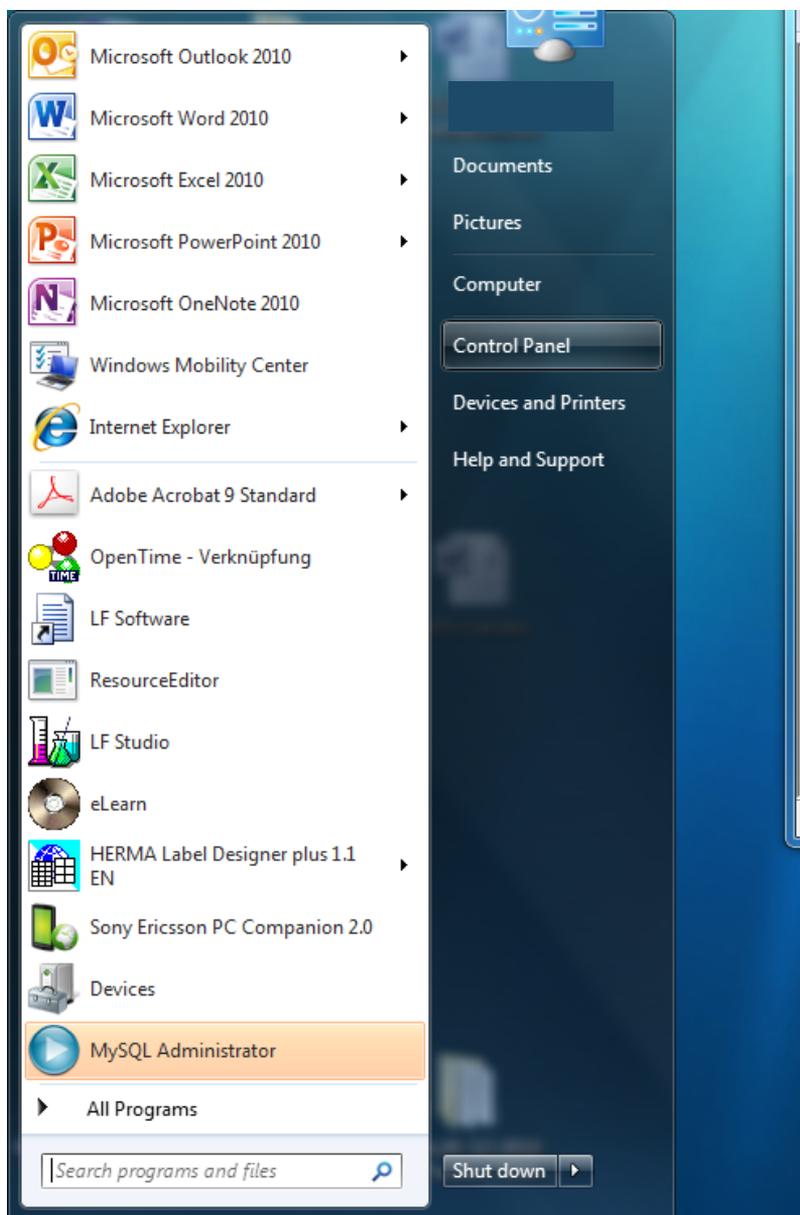
After completion of the installation process, press “Finish”.

6.2 USB Device Driver installation for Windows® 7

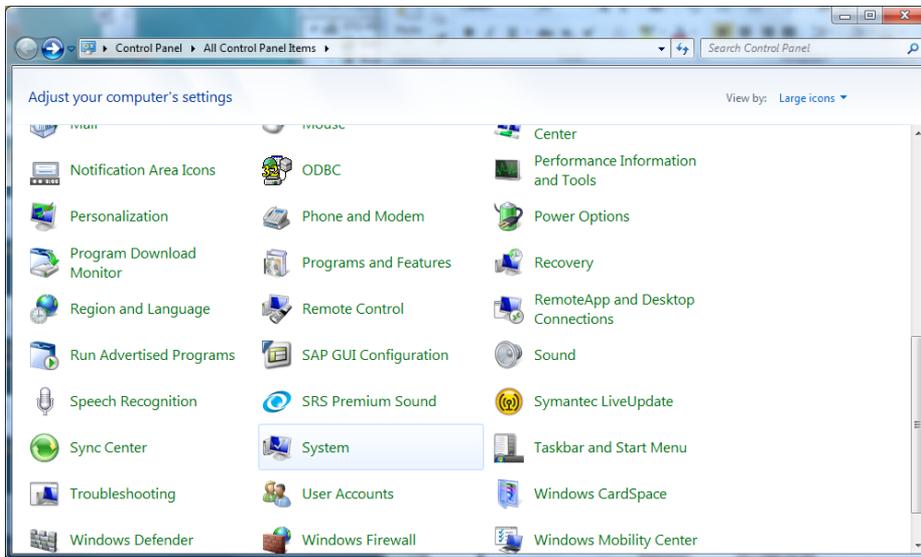
In some cases, the USB Device Drivers for the Quantum Blue® Reader may have been incorrectly installed by the automatic installation procedure of the operating system during the first connection of the device to the PC.

Please follow the steps described on the following pages in order to remove the previously installed drivers and to install the correct USB drivers provided with the CD-ROM.

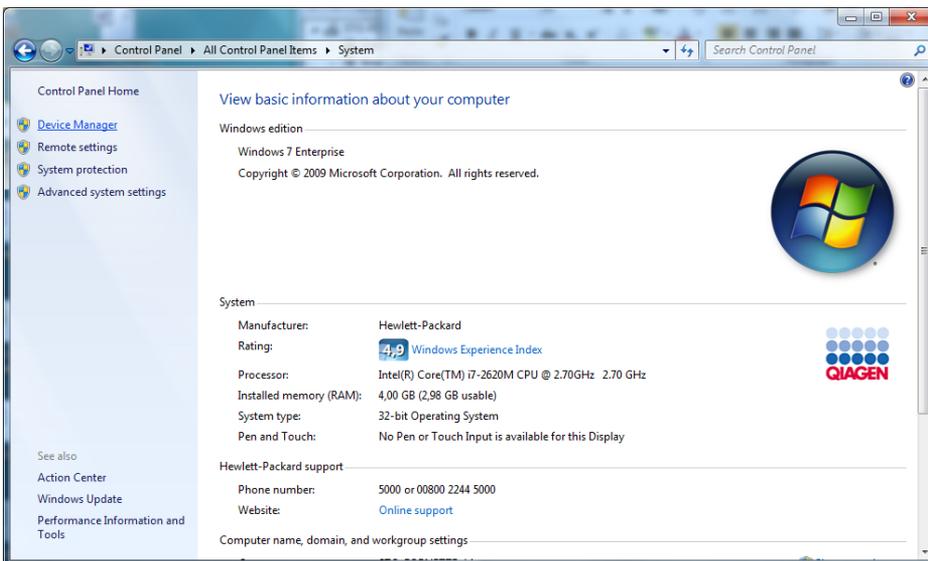
Connect the Quantum Blue® Reader to the PC
Open the “Control Panel” from the start menu



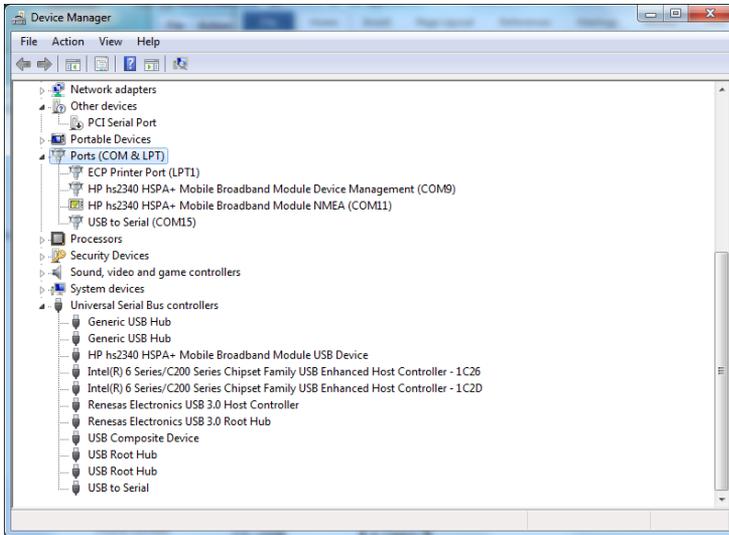
Open: „System“



Open: „Device Manager“

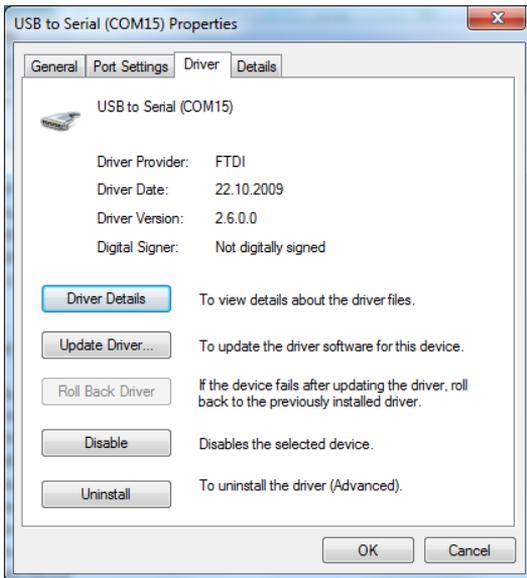


Open „Ports“, then open the item called “USB to Serial” (please note that this name might be different in other operating system versions)

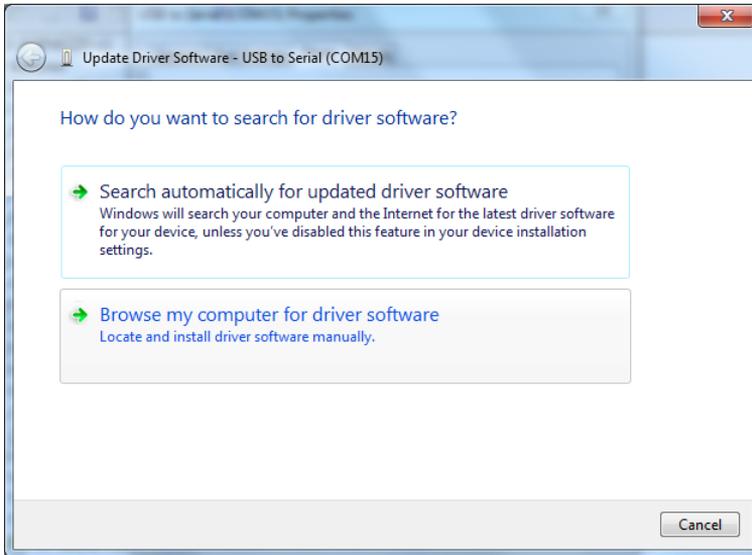


First press “Disable”

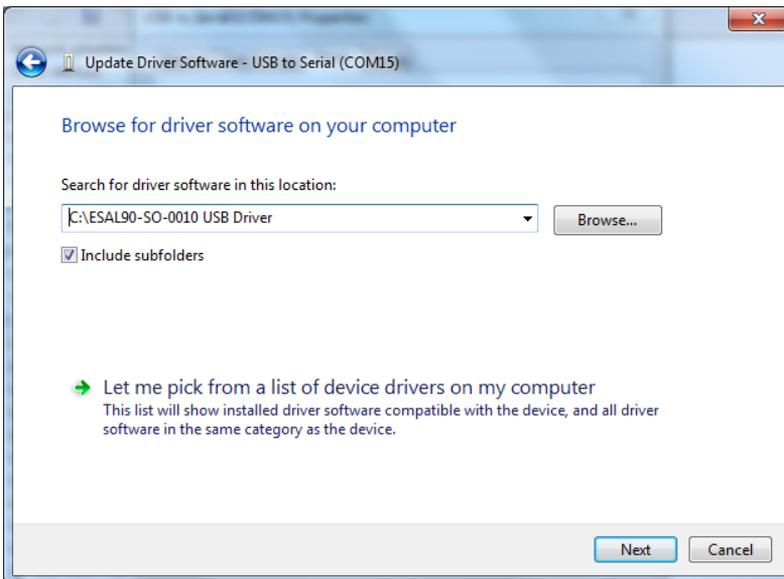
Then press “Update Driver...”



Select: "Browse my computer for driver software"

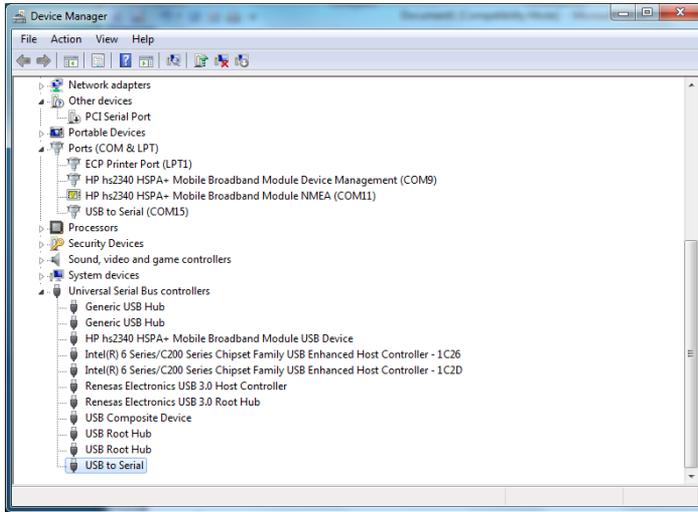


Choose the driver location either from your PC or from the CD-ROM using the button "Browse..." and then press "Next"

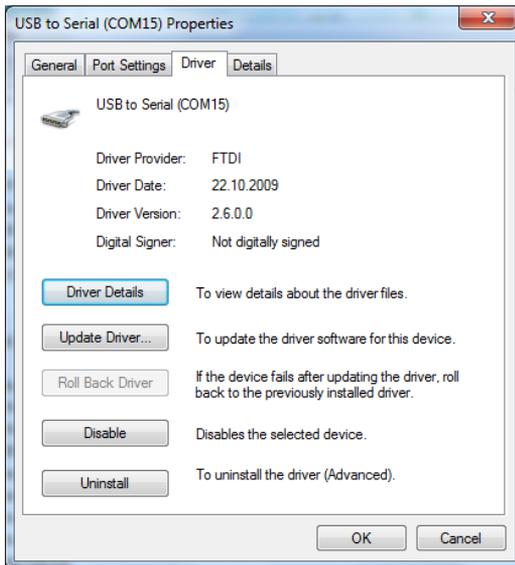


On the driver installation confirmation window press: “Close”

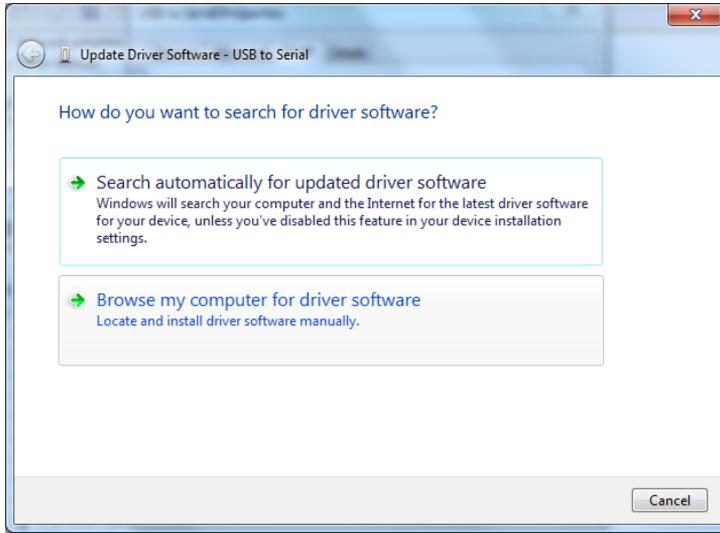
Then open the Device Manager under „Universal Serial Bus controllers“ the item called “USB to Serial” (please note that this name might be different in other operating system versions).



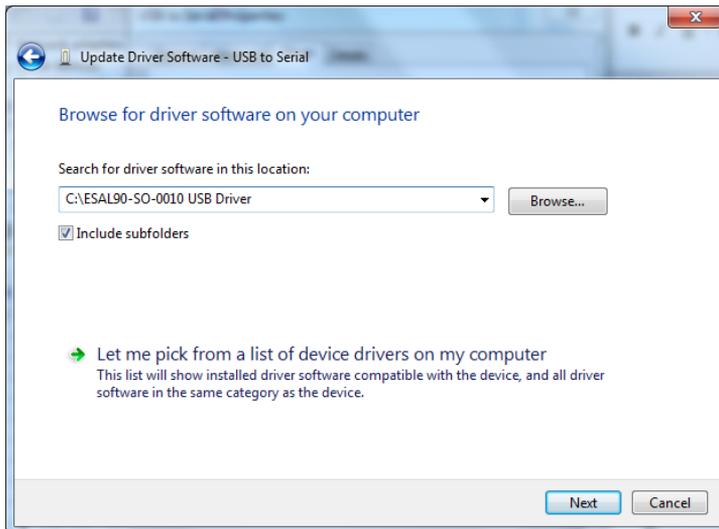
First press “Disable”, then press “Update Driver...”



Select: "Browse my computer for driver software"



Choose the driver location either from your PC or from the CD-ROM using the button "Browse..." and then press "Next"



On the driver installation confirmation window press: "Close"

Disconnect the Quantum Blue[®] Reader from the PC, wait for 5 seconds and re-connect it to the PC.

The Quantum Blue[®] Reader should now be ready to be controlled by the QB Soft Software.

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BÜHLMANN products are subject to the
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