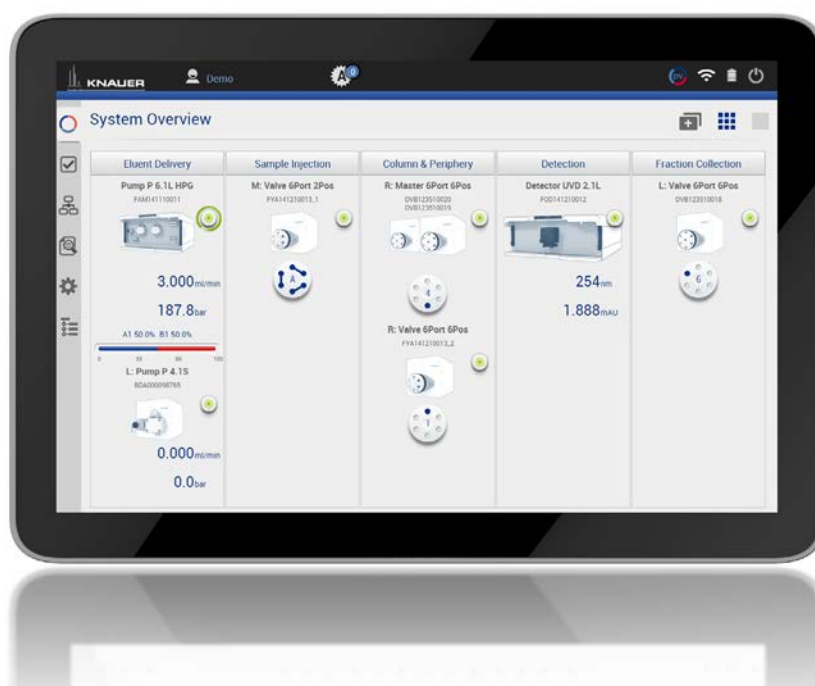


Mobile Control (Chrom)

Version 5.5

Software instructions





Note: For your own safety, read the instructions and observe the warnings and safety information on the device and in the instructions. Keep the instructions for future reference.

Technical Support: Phone: +49 30 809727-111 (9-17h, Central European Time)
Fax: +49 30 8015010
E-Mail: support@knauer.net
Languages: German, English

Publisher: KNAUER Wissenschaftliche Geräte GmbH
Hegauer Weg 38
D-14163 Berlin
Phone: +49 30 809727-0
Fax: +49 30 8015010
Internet: www.knauer.net
E-Mail: info@knauer.net

Version information: Article number: V6851-2
Version number: 1.1
Last update: 2019/02/22
Original edition

The information in this document is subject to change without prior notice.
For latest version of the instructions, check our website:
<https://www.knauer.net/en/Support/User-Manuals>



Copyright: This document contains confidential information and may not be reproduced without written content of KNAUER Wissenschaftliche Geräte GmbH.

© KNAUER Wissenschaftliche Geräte GmbH 2019
All rights reserved.

AZURA® is a registered trademark of
KNAUER Wissenschaftliche Geräte GmbH.

Table of contents

1. Product information	1
2. Mobile Control	3
2.1 New features in version 5.5	3
2.2 System requirements	3
2.3 Supported devices	4
2.4 Mobile Control Certificate	5
2.5 Monitor mode	6
3. Installation	7
3.1 Download and installation	7
3.2 Activation of the software	10
3.2.1 Start screen	10
3.2.2 License activation	10
3.2.2.1 Activation via automatically generated e-mail	11
3.2.2.2 Activation via copy of the device code	11
3.2.2.3 Activation via trial version	11
3.2.3 Selecting the trial version	12
3.2.4 Selecting the demo tour	12
3.2.5 Updating the Mobile Control	13
3.2.6 License validity	13
3.2.7 Mobile Control manual	13
4. Starting the Mobile Control	13
4.1 First steps	13
4.1.1 Connecting the PC/notebook/tablet to a network	13
4.1.2 Create a user account	16
4.2 General user interface	17
4.2.1 Control elements	18
5. System Overview	20
5.1 System configuration	20
5.2 Categorization of the functional blocks	20
5.2.1 Binary HPG configuration of AZURA® P 2.1L pumps	23
5.2.2 Synchronous switching of two valves	25
5.3 Device status	27
5.4 Detail View	27
5.4.1 User interface	27
5.4.2 Assistant	28
5.4.3 Autosampler	29
5.4.4 Column thermostat	30
5.4.5 Detector	31
5.4.6 Interface Box IFU 2.1 LAN	32
5.4.7 Pump	33
5.4.8 Valve	36
5.4.8.1 2 position valve	36
5.4.8.2 Multiposition valve	36

5.4.9 Synchronized switching	37
6. Program & Sequences.....	38
6.1 General interface	38
6.2 Program interface	40
6.3 Settings.....	41
6.4 Eluent Delivery.....	42
6.5 Sample Injection	43
6.6 Detection	43
6.7 Fraction Collection	44
6.8 Add a program	44
6.9 Export and Import programs.....	45
6.10 Select multiple programs for editing, exporting or deleting	47
6.11 Start a program	51
6.11.1 Starting a single program	51
6.11.2 Starting several programs/sequences	53
6.11.3 Preview run.....	55
6.12 Audit trial.....	56
6.13 Add a sequence.....	56
7. Run Queue.....	59
7.1 General interface	59
7.2 Show progress and history.....	60
8. Chromatogram window	62
8.1 Showing/hiding traces, defining left y-axis	62
8.2 Normalize traces	63
8.3 Add Second y-axis.....	64
8.4 Zoom into the screen	65
8.4.1 Via hand	65
8.4.2 Via mouse	65
9. Settings	66
9.1 General	66
9.1.1 Network settings	66
9.1.2 Reset of LAN settings to DHCP.....	67
9.1.3 Preferences	68
9.1.4 About	69
9.2 Instruments.....	70
9.2.1 General interface	70
9.2.2 Assistant	72
9.2.3 Autosampler.....	73
9.2.4 Column Thermostat 2.1	75
9.2.5 Detector	75
9.2.6 Interface Box IFU 2.1 LAN.....	77
9.2.7 Pump	79
9.2.8 Binary HPG configuration of AZURA® P 2.1L pumps	81
9.2.9 Valve.....	82

9.3 User management	83
9.3.1 Create a new user	84
9.3.2 Change user account	85
9.3.3 Changing own password	86
9.4 Advanced Settings	87
9.4.1 Configuration management	87
9.4.1.1 Configuration via menu Settings	89
9.4.1.2 Configuration via Log in	91
9.4.2 Energy Options	93
9.4.2.1 Putting devices into standby mode manually	93
9.4.2.2 Putting devices into standby mode automatically	93
9.4.2.3 Waking up devices from standby mode manually	94
9.4.2.4 Waking up devices from standby mode automatically	94
10. Checks & Tests	95
10.1 GLP	95
10.2.1 GLP check list	101
10.2 Checks - System Check	101
11. Logs & Errors	102
11.1 Activation of communication log	103
12. Data Viewer	104
12.1 Load a chromatogram	105
12.2 Chromatogram window	106
12.2.1 Overlay of two measurements	107
12.3 Programs	108
12.3.1 Integration Parameters	108
12.4 Settings	110
12.4.1 Appearance	110
12.4.2 Preferences	110
12.4.3 About	110
13. Firmware Wizard	111
13.1 Reset LAN settings	111
13.2 Update firmware version of connected devices	112
14. Troubleshooting	116
15. Repeat Orders	117
APPENDIX A Configuration of flow and pressure	118
A 1.1 Minimum flow rate and maximum flow rate	118
A 1.2 Configuration	119
A1.2.1 Direct control	120
A1.2.2 Control via program sequence	120



1. Product information

The Mobile Control is a perfect addition to your chromatography data system and can be sufficient to operate your instrument in stand-alone mode. Mobile Control completes two main tasks: On the one hand the software provides full access to AZURA® devices and features all functionalities of a display. On the other hand Mobile Control can be used to operate single devices or even whole systems with dedicated tasks. Program for hand-held devices which operates with Windows 10.

Features

- Operates devices of the AZURA product line. As soon as devices are accessed through other software, they cannot be operated via Mobile Control. However, information like the flow rate or the device status continues to be displayed.
- Data transfer between the devices and Mobile Control is usually realized via a WIFI router. Alternatively, the Mobile Control can also be installed on a computer with Windows 10 and access the devices via LAN.
- Automatic recognition and display of device-specific data and parameters of the connected devices
- Creation of different password-protected user accounts with limited authorization (possible, if no run is in progress)



Note: This manual only describes the functionalities of the Mobile Control. Note the instructions of the respective devices.

Identification

The software name, manufacturer name, article no. and serial number can be found on the device card, which is in the scope of delivery.

Legend

- ① Serial number
- ② Article number

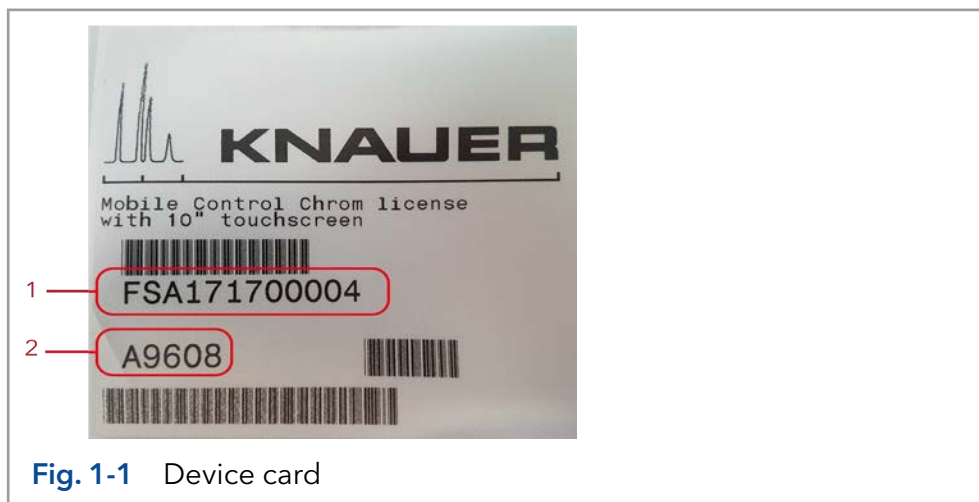


Fig. 1-1 Device card

Target groups

This instruction addresses persons who are qualified as chemical laboratory technicians or have completed comparable vocational training.

The following knowledge is required:

- Fundamental knowledge of liquid chromatography
- Knowledge regarding substances that are suitable only to a limited extent for use in liquid chromatography
- Knowledge regarding the health risks of chemicals
- Participation during an installation of a device or a training by the company KNAUER or an authorized company.
- All instructions of the devices described in this document

What must be taken into account?

- Environmental, installation and connection specifications in the instructions national and international regulations pertaining to laboratory work
- Good Laboratory Practice (GLP)
- Accident prevention regulations published by the accident insurance companies for laboratory work
- Power strip: If several devices are connected to one power strip, always consider the maximum power consumption of each device.
- Power supply: Only connect devices to voltage sources, whose voltage equals the device's voltage.



2. Mobile Control

2.1 New features in version 5.5

- New devices supported: Valve drive AZURA® VU 4.1 and Assistant AZURA® ASM 2.2L
- AZURA® AS 6.1L support 30 vials tray
- Interactive queue and history for better accessibility of data
- Duplicate input facilitates the virtual keyboard entry
- Show gradient composition as varicolored background of chromatogram
- Optional second y-axis of chromatogram in Mobile Control and Data Viewer
- Select multiple programs for editing, exporting or deleting
- Support of Autosampler as standalone device
- Allow to start programs with first line only
- Enable autozero and valve switching during program run
- Allow instrument Power Up and stop pumps in Monitor Mode
- Sort program by date/name
- Redesigned reports
- Reports are saved in Results folder
- Allow flipped landscape rotation
- general improvements of user interface

2.2 System requirements

Parameter	Requirement
Operating system	Microsoft Windows® 10
Display size	Minimum 10"
Display resolution	1280 x 800
RAM	1 GB without data collecting 2 GB with data collecting
CPU	1.33 GHz
Processor	Dual-Core
Disc space	500 MB

2.3 Supported devices

Device type	Type	Minimum required firmware version
Assistant	AZURA® ASM 2.1L	V 01.14
	AZURA® ASM 2.2L	V 01.08
Autosampler	AZURA® AS 6.1L	V 01.18
	AZURA® AS 3950 2.1LA	V 01.18
Column thermostat	AZURA® CT 2.1	V 01.06
Detector	AZURA® RID 2.1L	V 01.20
	AZURA® UVD 2.1L	V 02.06
	AZURA® DAD 6.1L*	V 01.23
	AZURA® DAD 2.1L*	V 01.10
	AZURA® MWD 2.1L	V 01.10
	AZURA® UVD 2.1S	V 01.11
Interface box	IFU 2.1 LAN	V 01.05
Pump	AZURA® P 2.1L	V 01.09
	AZURA® P 6.1L	V 01.05
	AZURA® P 4.1S	V 01.37
	AZURA® P 2.1S	V 01.37
Valve	AZURA® V 2.1S	V 05.01
	AZURA® VU 4.1	V 05.68

* no acquisition of 3D data (4 channels only)

2.4 Mobile Control Certificate

After purchasing a Mobile Control license, KNAUER provides a certificate (containing activation code, serial numbers and more). Keep the certificate secure.

Legend

- ① Activation Code
Mobile Control /
Chrom
- ② Serial number tablet
- ③ Serial number
Mobile Control
license
- ④ Article number

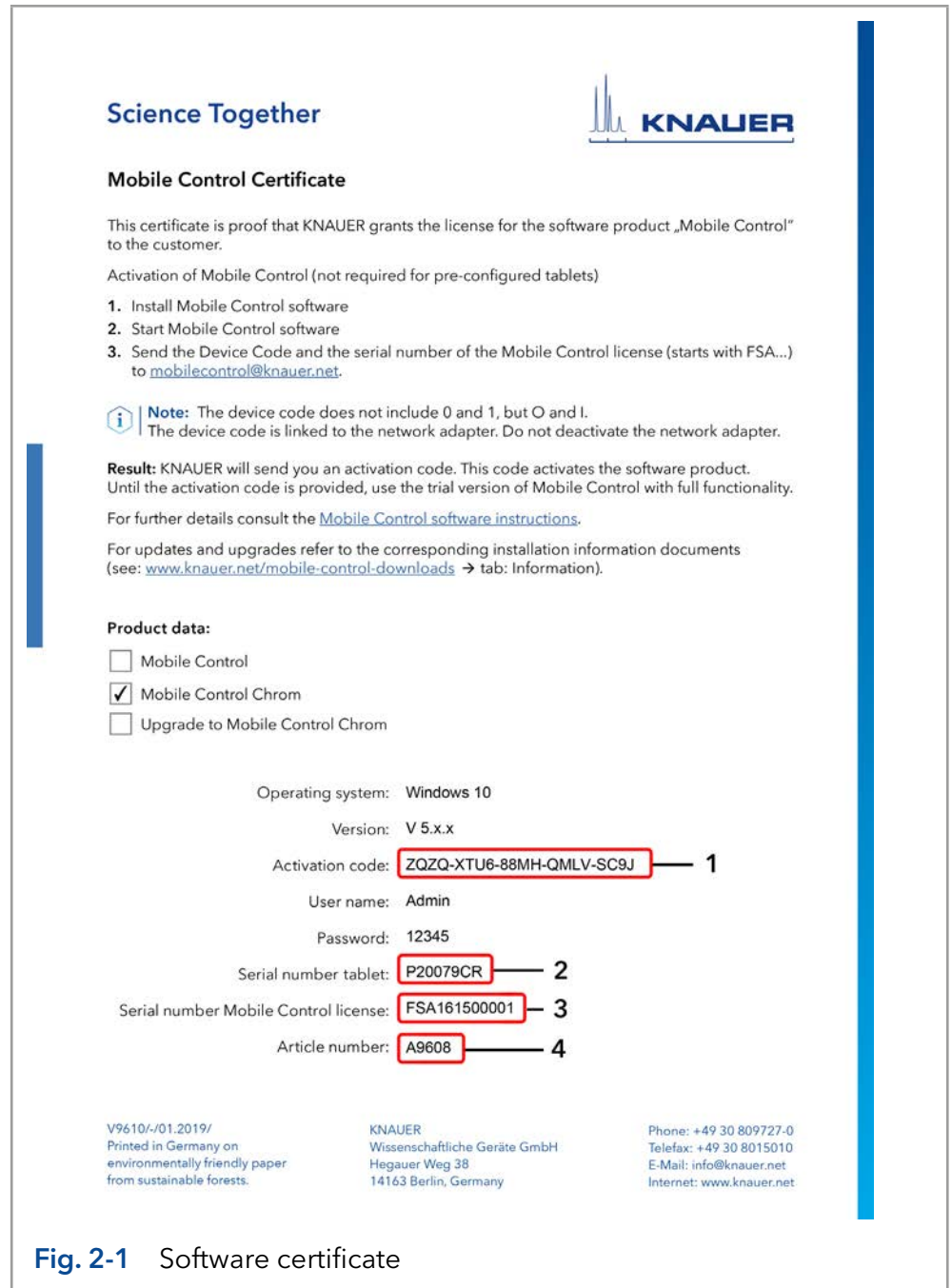


Fig. 2-1 Software certificate



Note: Before activation, the Mobile Control will generate a new device code every time the Mobile Control is opened. It is insignificant which of these codes you send to KNAUER together with the serial number of the purchased license, as the activation code provided by KNAUER is valid for all device codes generated by this end device.



Note: With activation of Mobile Control, the license is linked to the MAC address of the network adapter of the hand-held device and cannot be transferred to another device. If the device goes out of operation, one more license may be generated for a new hand-held device. Contact the KNAUER technical support for a new license.



Note: You can use the activation code to activate the latest version of Mobile Control. Mobile Control updates are for free. No need to ask for a new code. Refer to the installation information update (included in the download folder).

2.5 Monitor mode

The Mobile Control is automatically set to monitor mode, if a monitor mode supported KNAUER chromatography data system (software) accesses the connected HPLC devices. In monitor mode, the run parameters of the connected devices can be monitored. Except stopping pumps, no entry can be made. The Monitor Mode is quit automatically, when OpenLAB® CDS/ClarityChrom®/ClarityChromPrep is quit.

The latest version of Mobile Control is supported by:

- OpenLAB® CDS EZChrom Edition from KNAUER driver package
- ClarityChrom®/ClarityChromPrep from KNAUER driver package.
Check release note regarding version compatibility

Refer to the release notes (see picture below) for information which sets of driver are working with Mobile Control.

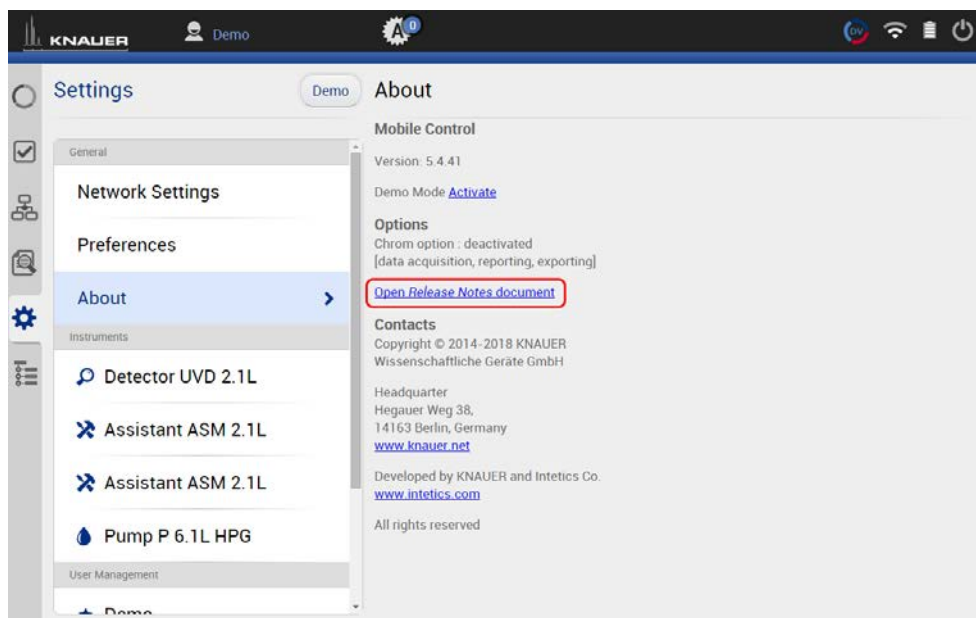


Fig. 2-2 Link to the release notes



3. Installation

3.1 Download and installation

Three types of modes are available:

1. Demo tour

- offers an overview of the MC functionalities
- operation of virtually connected devices is possible
- simulation of programs, sequences and data acquisition
- free of charge

2. Trial version

- full functionality (like full version) for 5 days
- free of charge

3. Full version

- full functionality (refer to chapter 2.1 for functions)
- every update is free of charge



Note: There are three **independent installers** for Mobile Control, Data Viewer and Firmware Wizard. Please perform three individual installations. The Mobile Control license does not include the Data Viewer. Mobile Control Chrom includes all three installers.



Note: If you ordered a software license with tablet, Mobile Control is already installed. Following instructions are given if you ordered the software license without a tablet. Refer to the installation information included on the document website (see below).



Note: If you have a previous version, deinstall it. Delete **C:/Mobile Control** after securing of the data. The system configuration and all programs must be created new. Refer also to the update information included on the document website (see below).

Download the latest installation information from our website: www.knauer.net/mobile-control-downloads.

Process	Figure
---------	--------

1. Download the zip-folder including the installer of Mobile Control, Data Viewer and Firmware Wizard from the website: www.knauer.net/mobile-control-downloads.

2. A zip-file will be downloaded. After successful download, open the file.

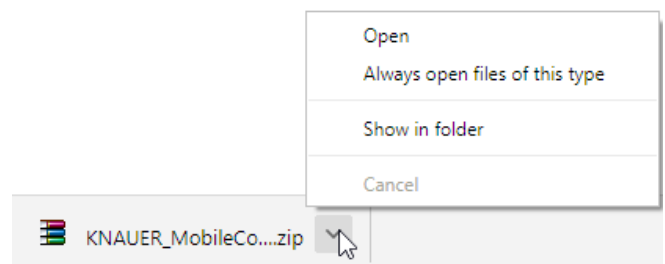


Fig. 3-1 Open the zip-file

Process

3. For full functionality you need to install the *.exe files **twice** and the *.msi file **once**. Unzip the folder.
4. Run the file „AZURA_MC_5.2.X.exe“. An install wizard opens.

Figure

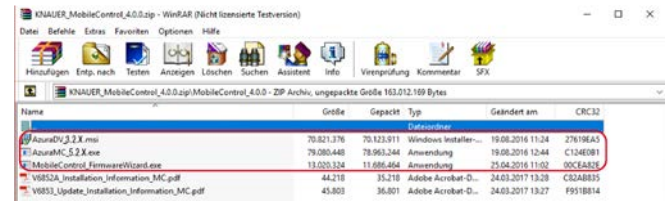


Fig. 3-2 Extraction of the zip-file

5. Select <Next>.
6. Enter customer information. Select <Next>.
7. Select <Install>.

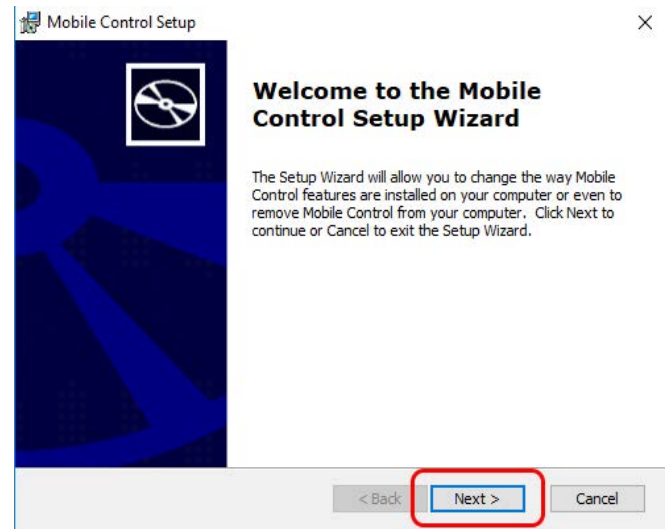


Fig. 3-3 Installation of the software

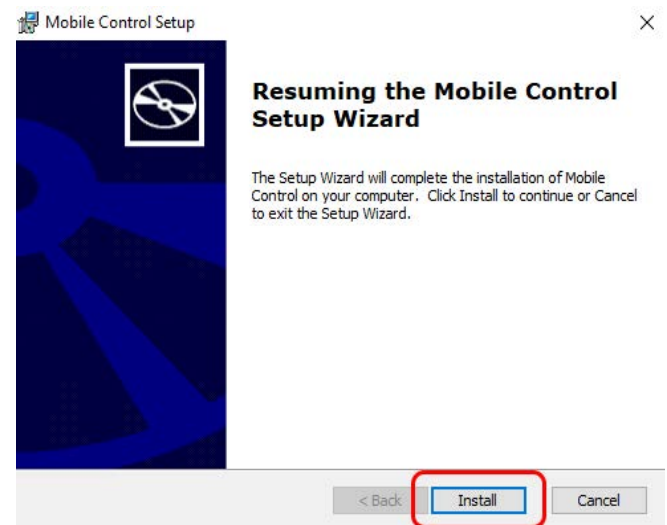


Fig. 3-4 Installation of the software

Process	Figure
---------	--------

8. The software will be installed on your computer.
9. Complete the installation by selecting <Finish>. A desktop icon will be created.

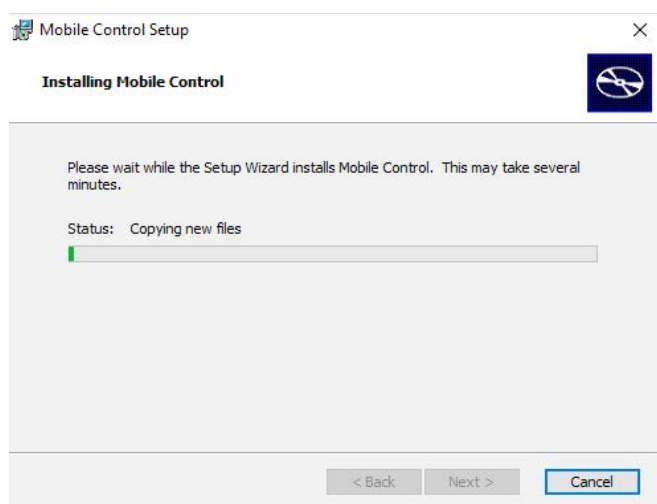


Fig. 3-5 Installation of the software

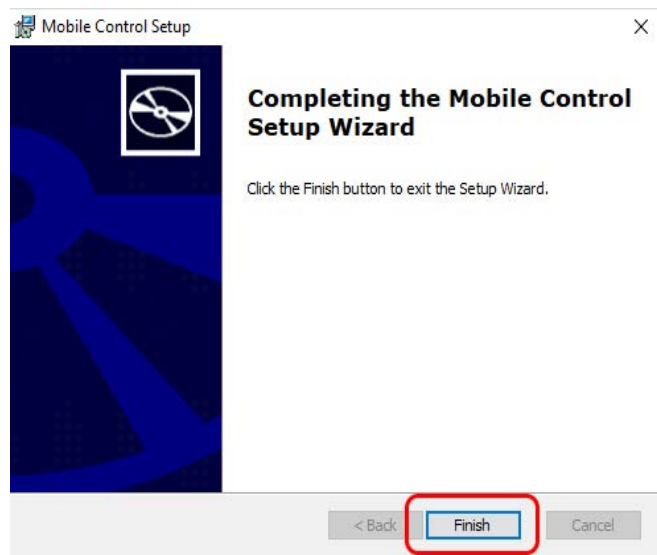


Fig. 3-6 Installation of the software

10. Double-click the Mobile Control icon to open the software.



Fig. 3-7 Desktop icon



3.2 Activation of the software

3.2.1 Start screen



Note: If you order a Mobile Control license together with a tablet, KNAUER delivers the configured tablet with activated Mobile Control and certificate.



Note: Make sure that the WLAN of the hand-held device is switched on before entering the activation code.

3.2.2 License activation



Fig. 3-8 Software Mobile Control

After starting the Mobile Control the first time, a 20-digit device code is generated. This device code is linked to the MAC address of the network adapter of the hand-held device on the Mobile Control is installed (see below).

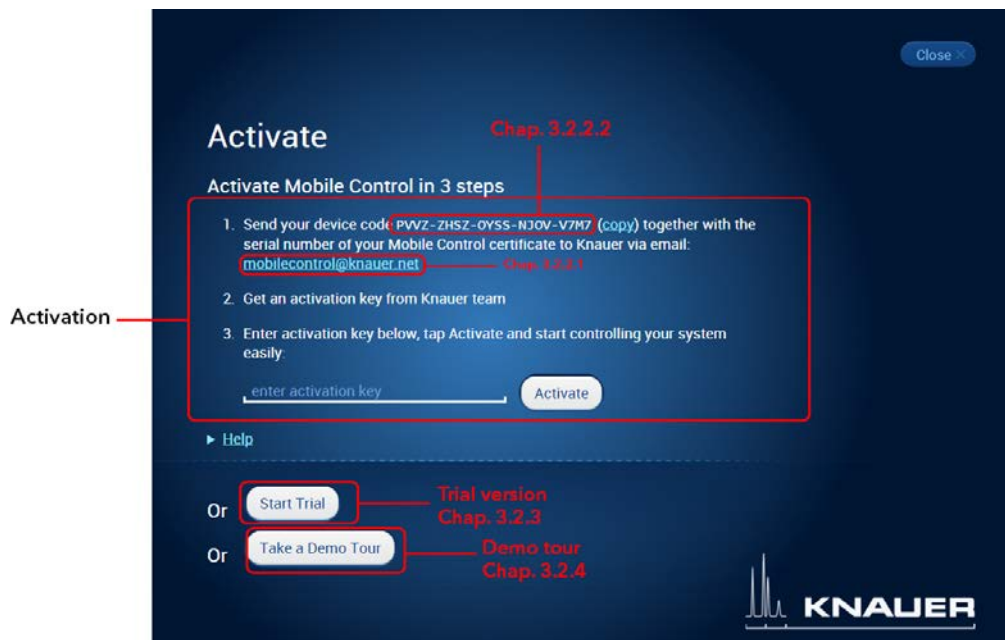


Fig. 3-9 Activation, Trial or Demo Tour of the Mobile Control



Note: A non-activated Mobile Control will generate a new device code every time the software is started. It is insignificant which of these codes you send together with the serial number of the license, in order to request the activation code, as the provided activation code is valid for all device codes generated by the end device.

3.2.2.1 Activation via automatically generated e-mail

1. Click on the mail address. A mail with your device code will be generated (if the mail is not generated, proceed as explained in chapter 3.2.2.2).
2. Add the serial number of your software before sending. You find it on the device card or the certificate, delivered with your order (starts with FSA...).
3. Send the mail.

Legend

- ① Activation code Mobile Control/Chrom
- ② Serial number tablet
- ③ Serial number MC license
- ④ Article number

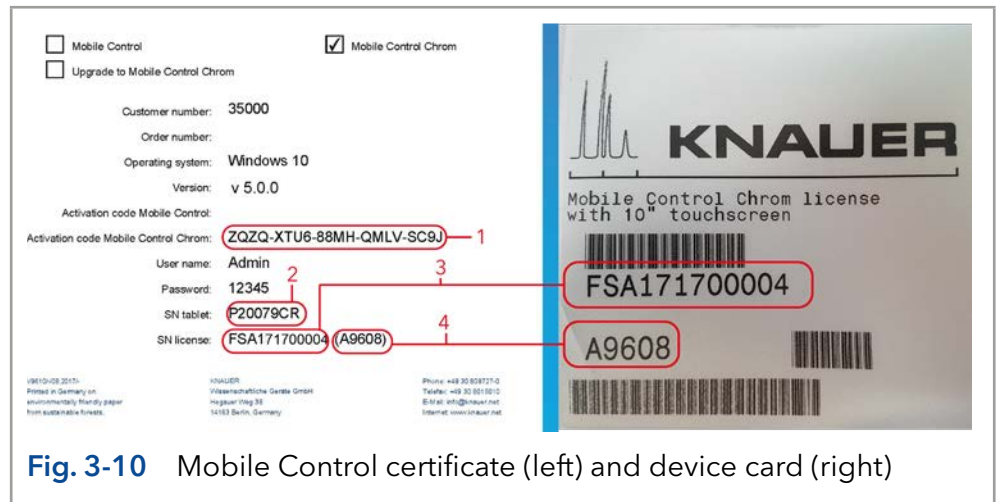


Fig. 3-10 Mobile Control certificate (left) and device card (right)

3.2.2.2 Activation via copy of the device code

1. Press the <copy> button and open your mail program.
2. Paste the code in mail.
3. Add the serial number of your Mobil Control license before sending. You find it on the device card, delivered with your order. It begins with FSA (refer to Fig. 3-10).

Send a mail to mobilecontrol@knauer.net.



Note: Until the activation code is provided, just start the trial version with full functionality.

3.2.2.3 Activation via trial version

Go to SETTINGS > ABOUT. Start the Activate Link. A new window opens. You can activate your Mobile Control via activation code (refer to chapter 3.2.2.1).

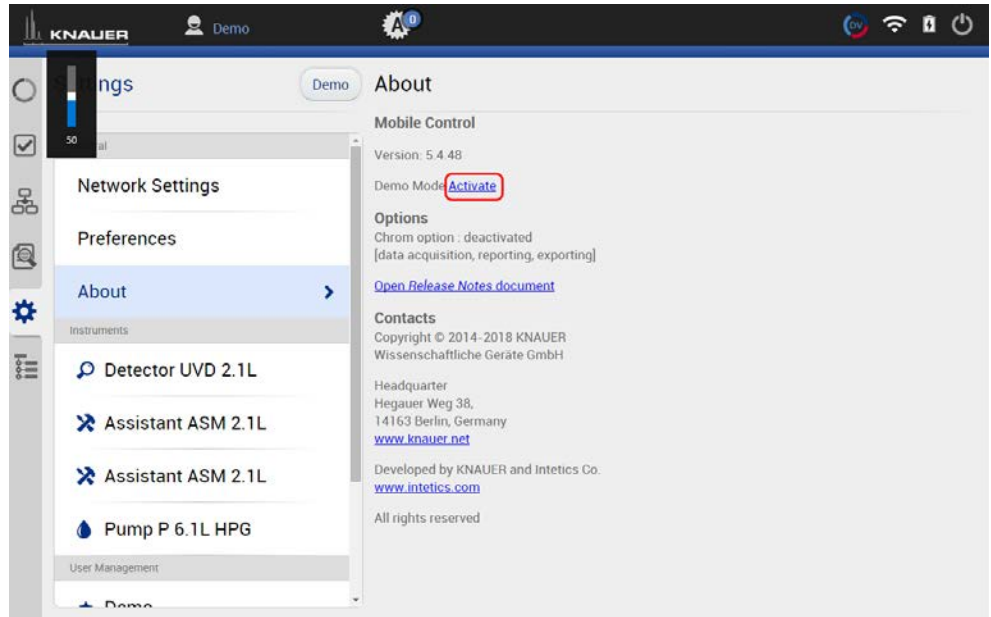


Fig. 3-11 Activation via Trial version

3.2.3 Selecting the trial version

Press the <Start Trial> button to activate the software with full functionality for 5 days.

3.2.4 Selecting the demo tour

1. Press the <Take a Demo Tour> button to activate the software in the demo mode
or
2. Create a new user in settings - user management.
Use the following entries. Select all permissions.

- **Username:** Demo
- **Password:** Demo



Note: Select all permissions for the Demo user to have full functionality.



Note: Virtual devices can only be found if tablet is connected to a router.

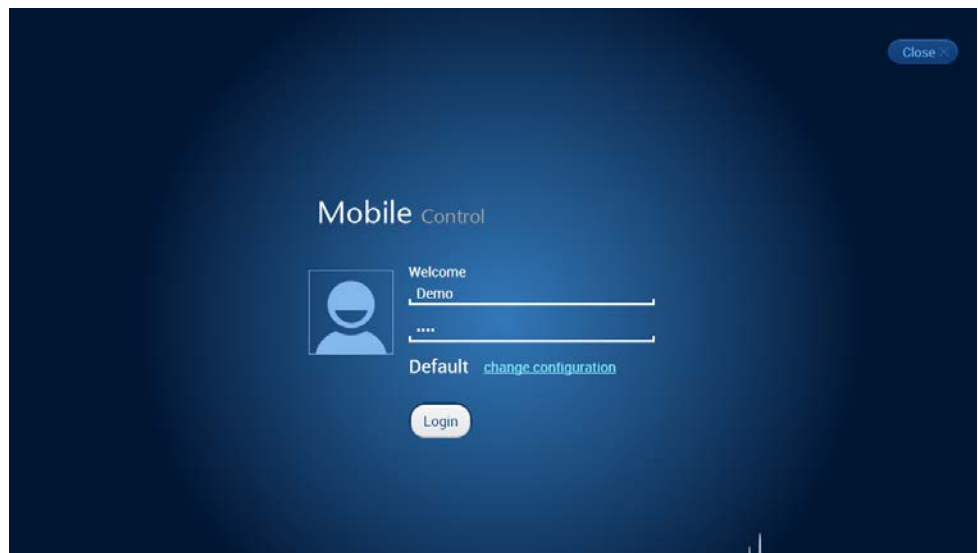


Fig. 3-12 Log into Demo mode

3.2.5 Updating the Mobile Control

To update the Mobile Control, download the latest version from the [KNAUER website](#). Mobile Control updates with the same article number are free of charge.

Deinstall the previous version of the Mobile Control before installing the updated version. After deinstallation delete **C:/Mobile Control**. In advance you can export programs saved in the old version and save the collected data.

The latest update information is included in the download folder. You can also download this file from our website: www.knauer.net/mobile-control-downloads.

3.2.6 License validity

After activation, the license is linked to the MAC address of the WLAN adapter of the PC/tablet/notebook and cannot be transferred to another device. If the device goes out of operation, one more license may be generated for a new hand-held device. Contact the KNAUER Technical Support for a new license. Mobile Control updates are for free. You can use the activation code to activate the latest version of Mobile Control.

KNAUER Technical Support: +49 30 809727-111

Fax: +49 30 8015010

E-mail: mobilecontrol@knauer.net

You can make your requests in English and German.

Re-installing the operating system on the same device has no effect on the validity of the license because the license is linked to the hardware of the device. The activation code may be entered again.

3.2.7 Mobile Control manual

The manual is provided for download on the KNAUER website www.knauer.net/en/Support/User-manuals/Software.

When you order a Mobile Control with a tablet, the manual as PDF file is included.



4. Starting Mobile Control

4.1 First steps

4.1.1 Connecting the PC/notebook/tablet to a network

To operate the devices with the Mobile Control, a LAN connection has to be established between the PC/notebook/tablet and the WLAN router. All devices are connected via LAN cables with the WLAN router.

Process

The highlighted icon in the lower left of your display indicates the status of the network connection.

1. Click on the symbol to enter the network settings on your tablet.

Mobile control will be supported for tablets/PC/notebooks running with operating system Microsoft Windows 10.

2. Select the network you want to connect to.

Figure



Fig. 4-1 Open the zip-file



Fig. 4-2 Network overview

Process

3. Select <Connect> to connect to the network.

You can activate the checkbox to connect automatically to this network.

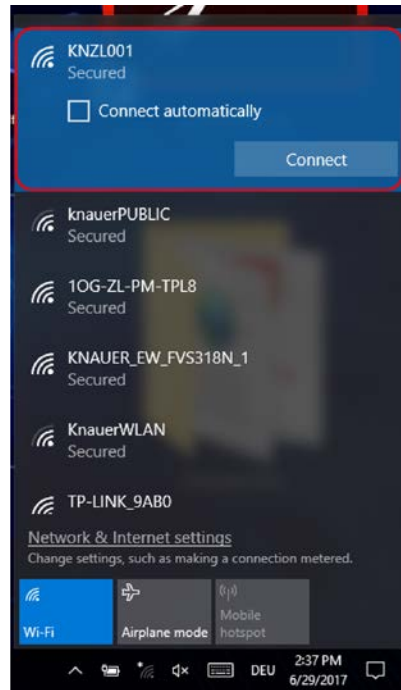
Figure

Fig. 4-3 Connecting to the network

4. If required, enter the password.
5. Click <Connect>.
6. After successfully checking the network requirements, the computer is connected.

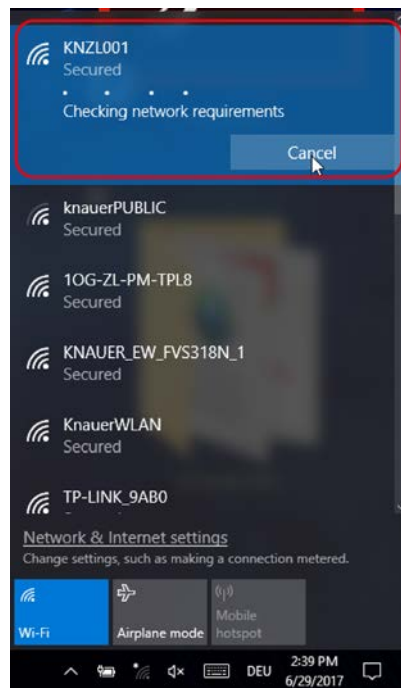


Fig. 4-4 Network connection

Process

- 7. If the network symbol on the lower left side has changed, your network connection is working.

Figure

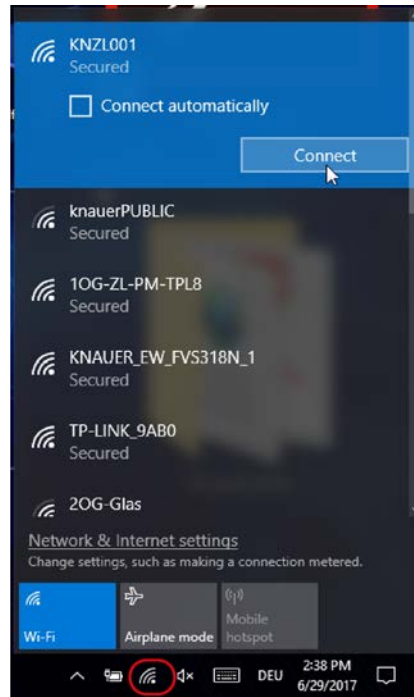


Fig. 4-5 Network status

- 8. You can also check or edit your network connection in the Mobile Control app: SETTINGS > CONFIGURATION MANAGEMENT.

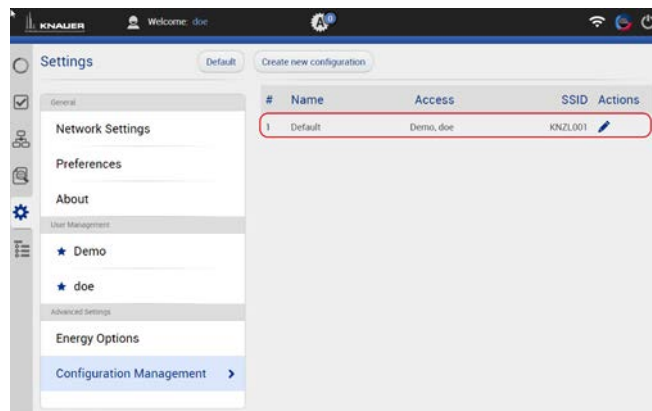


Fig. 4-6 Configuration list in the software



Note: If WLAN connection is lost, all pumps will stop with exception of the standalone pumps AZURA® P 4.1S and AZURA® P 2.1S. Compact pumps integrated in an assistant also stop automatically in this case.

4.1.2 Create a user account

If you start the Mobile Control for the first time, you are prompted to enter a user name and a password. This user (administrator) has full access to the Mobile Control and can create additional users, edit them or assign rights (refer to chapter 9.3).

Process

Figure

1. Double-click on the icon.



Fig. 4-7 Icon on the desktop

2. The start screen of the software opens.



Fig. 4-8 Start screen

3. Enter user name and password.
4. Repeat entering the password.
5. Click <Create Account>.

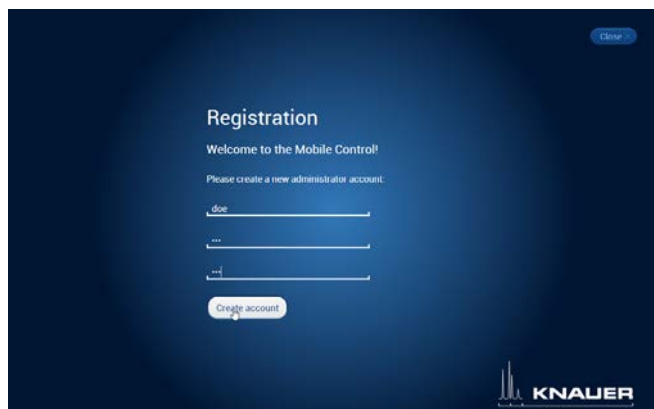


Fig. 4-9 Registration screen



Note: If you received a tablet with a pre-installed Mobile Control, KNAUER has set up a user account for you already. In this case, the **user name** is 'Admin' and the **password** is '12345'. You can find this information on the provided certificate as well. The user name and the password can be changed (refer to chapter 9.3).

6. Log in by entering the user name and password or click <Close> to close Mobile Control.

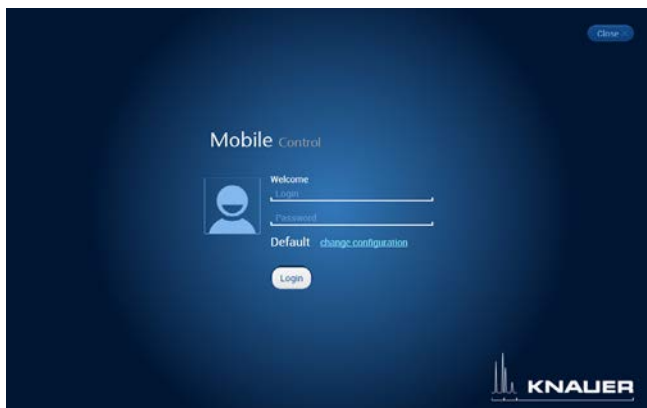


Fig. 4-10 Login screen



Practical tip: If more than one configuration is defined, it is necessary to select the required configuration. For more information read the chapter on configurations (see chapter 9.3).

4.2 General user interface

Legend

- ① System Overview
- ② Checks & Tests
- ③ Programs and Sequences
- ④ Logs and Errors
- ⑤ General
- ⑥ Run Queue
- ⑦ Chromatogram View
- ⑧ Logged User
- ⑨ Error Messages
- ⑩ Data Viewer
- ⑪ W-LAN Reception
- ⑫ Battery Status
- ⑬ User Logout
- ⑭ Detail View
- ⑮ System Overview
- ⑯ System Configuration

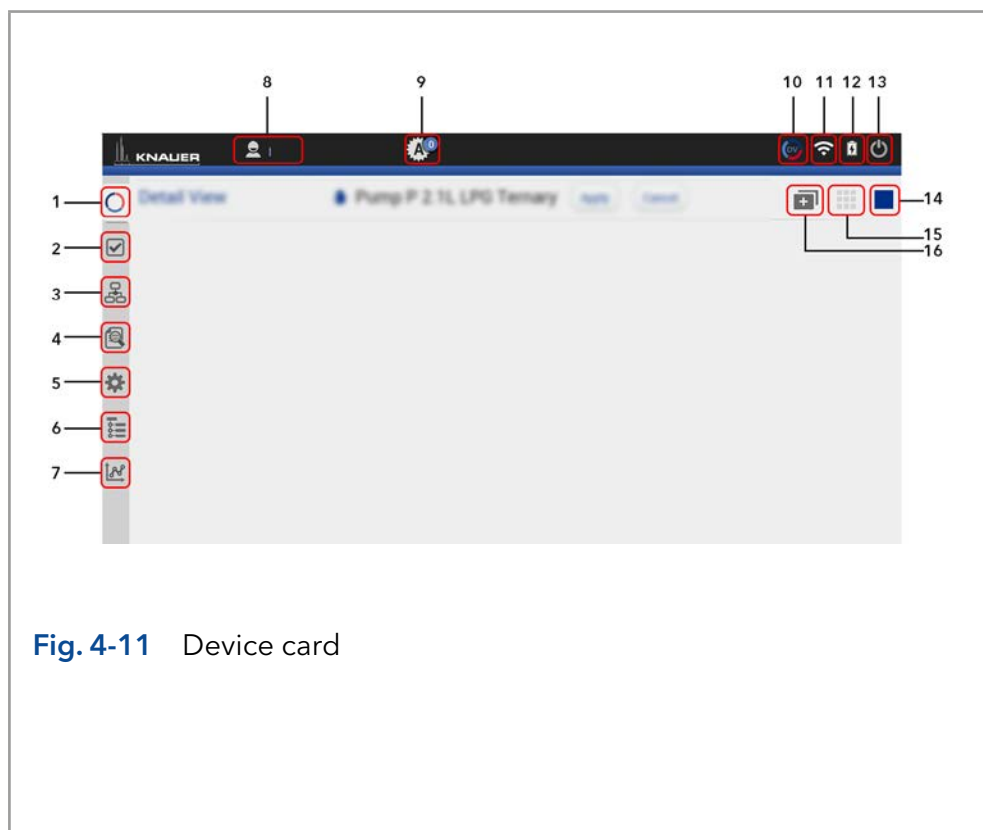
















Fig. 4-11 Device card

4.2.1 Control elements

Control element	Explanation
	<p>System Overview</p> <ul style="list-style-type: none"> Shows an overview of all connected devices with the most important parameters.
	<p>Checks & Tests</p> <ul style="list-style-type: none"> Displays GLP data for the selected device. Performs a system check.
	<p>Programs & Sequences</p> <ul style="list-style-type: none"> List of all saved programs and sequences.
	<p>Logs & Errors</p> <ul style="list-style-type: none"> Lists all errors and system logs.
	<p>Settings</p> <p>General</p> <ul style="list-style-type: none"> Network Settings shows network interfaces and LAN settings. Preferences displays basic settings of the devices. About: The section lists the version number, activation code, contacts and release notes. Istruments: A list of all connected devices is shown. You can change the settings of the device: <p>User Management</p> <ul style="list-style-type: none"> User accounts or the Demo account for the Demo Tour can be created or edited. <p>Advanced Settings</p> <ul style="list-style-type: none"> Energy Options displays standby mode settings and wakes up devices from standby mode. Configuration management summarizes all configurations with the router SSID and authorized users
	<p>Run Queue</p> <ul style="list-style-type: none"> Overview of processable programs and sequences.
	<p>Program</p> <ul style="list-style-type: none"> The Chromatogram shows the live data of detectors, pumps and valves.
	<p>System Overview, Detail View</p> <ul style="list-style-type: none"> Toggles between System Overview and Detail View.

Control element	Explanation
	<p>Device Widget</p> <ul style="list-style-type: none"> ■ Displays most important parameters depending on the device. ■ Push the widget to enter the Detail View of the device.
	<p>Error messages</p> <ul style="list-style-type: none"> ■ Displays error messages. Click on the icon to read them.
	<p>Stop</p> <ul style="list-style-type: none"> ■ Stops the run.
	<p>Logout</p> <ul style="list-style-type: none"> ■ Logs out the user and displays the login screen.
	<ul style="list-style-type: none"> ■ Button with different functionalities, e.g. Run, Stop, or Standby.
	<p>Text field and slide control</p> <ul style="list-style-type: none"> ■ Slide control sets values. The set value is displayed in the text field. ■ Enter the numeric value by tapping the text field.



5. System Overview

5.1 System configuration

In the system configuration you can determine the group of devices which are controlled by Mobile Control.

The devices can be assigned in four categories: Eluent Delivery, Sample Injection, Column & Periphery, Detection, Fraction Collection. This classification is continued through Mobile Control, e.g. to facilitate program writing.



Practical tip: For easier handling, all device components in the menu „Programs“ are arranged in the same way as the tabs in menu „System Overview“. Before you add a program we recommend to ensure correct system configuration.

5.2 Categorization of the functional blocks



Note: Only one multiposition valve can be addressed as fraction collection valve.

Device	Block	Maximum device number
Autosampler	Sample injection	1
Column Thermostat	Column & periphery	2
Detector, Interface box IFU 2.1 LAN	Detection	3 (max. 6 signals)
Pump	Eluent delivery	6
Valve	Sample injection	20 (12 pcs. in assistants)
	Column & periphery	
	Fraction collection	



Note: The maximum allowed number of valves is 20, which does not depend on the combination of the functional blocks and within these blocks.

Process

1. Click on <System Configuration> to configure your system.

Figure

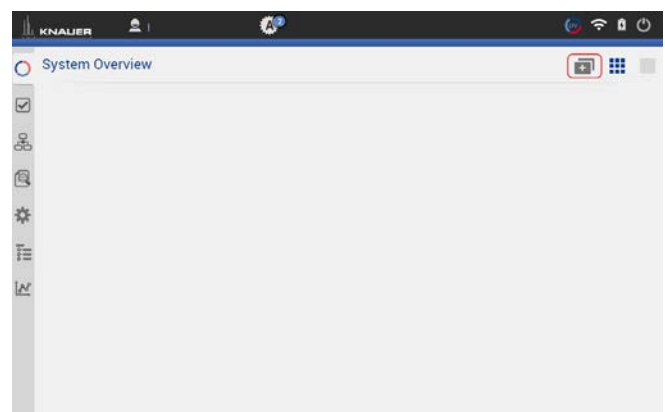


Fig. 5-1 System Configuration overview

Legend

- ① This function deletes the actual system configuration.
- ② The software makes an automatic configuration with connected devices in the network.
- ③ The software searches for all devices in the connected network and displays them on the left side (available instruments).
- ④ Always select <Save > to confirm your selection.

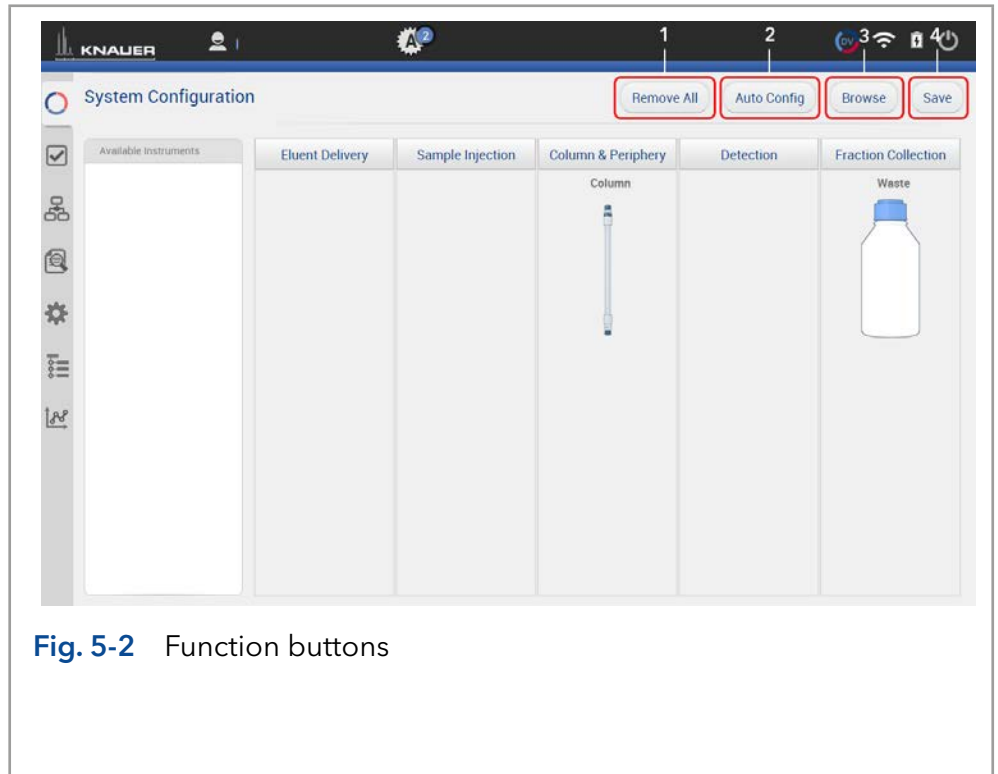


Fig. 5-2 Function buttons

Process

Figure

5. The software loads all connected devices. This may take a few seconds.

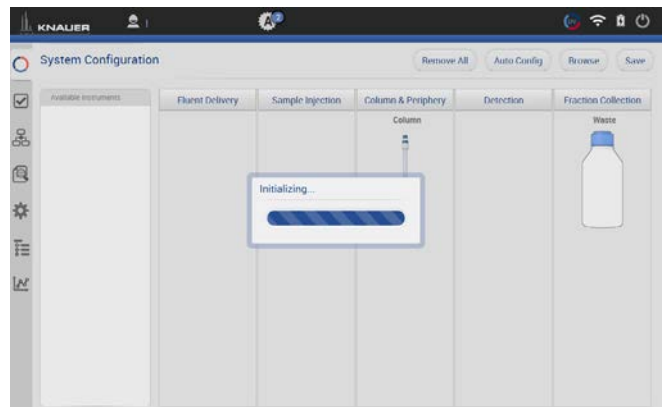


Fig. 5-3 Loading process of System Configuration

6. On the left side all connected devices are shown.

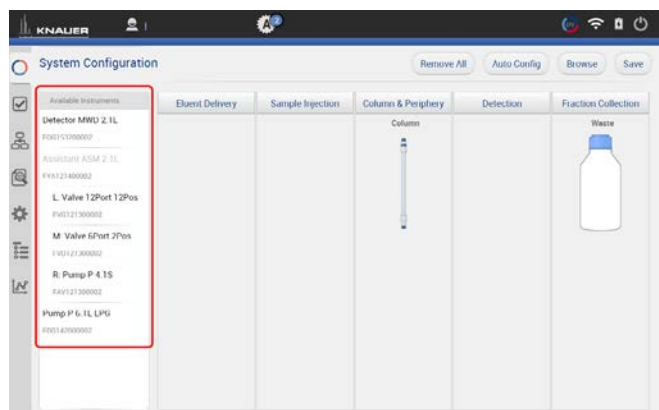


Fig. 5-4 Connected devices

7. Select <Browse>.
8. Drag and Drop to shift the device into the block.

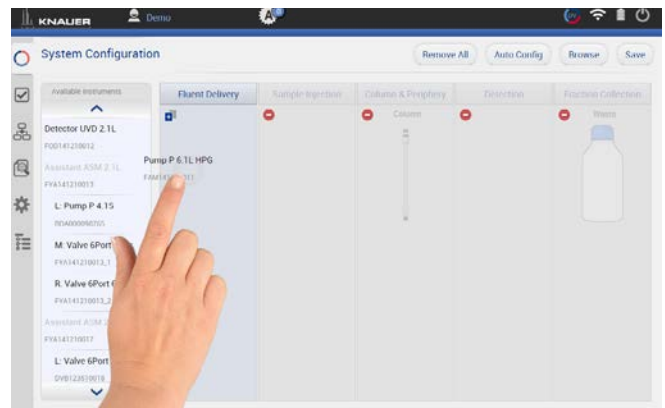


Fig. 5-5 Drag and drop of the devices

9. Press the „Settings“ symbol on the device to enter the device settings.

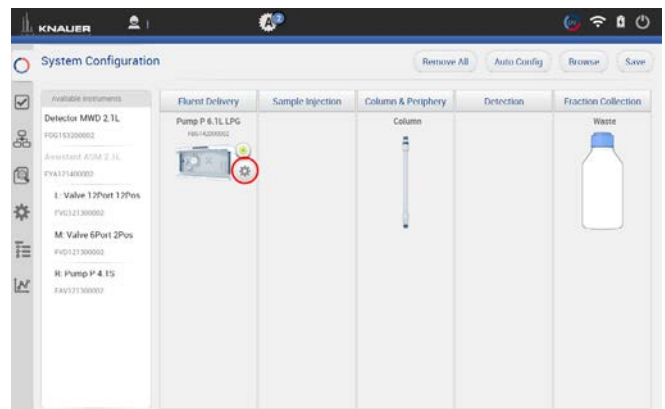


Fig. 5-6 Settings symbol of the devices

10. Here general device settings are shown. Refer to chapter 9 for further information.

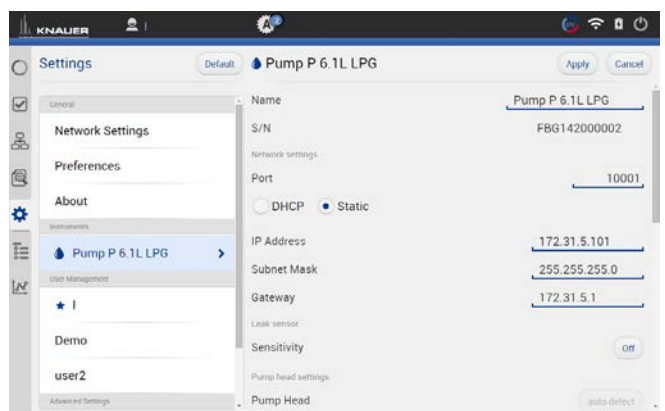


Fig. 5-7 Device settings

11. If you tap <Autoconfig>, the devices will be configured automatically. After successful connection of the device, a message is shown in the lower part of the screen.



Fig. 5-8 Status message after connection

- After confirming the configuration with <Save>, an overview of the system configuration is shown (System Overview). Below each symbol device-specific parameters are displayed.

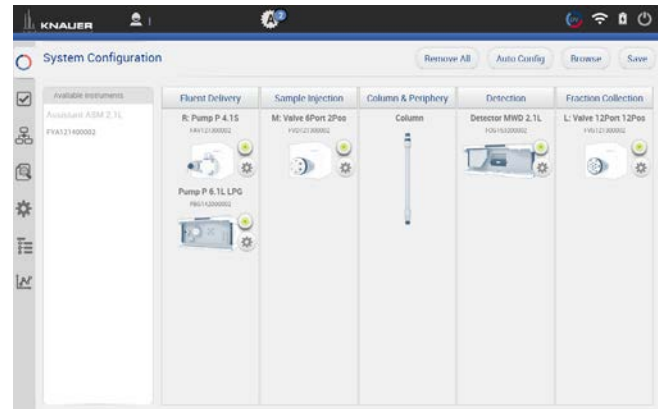


Fig. 5-9 Overview connected devices

- Go to SYSTEM OVERVIEW.
- You see the system configuration with most important device specific parameters below the widget.
- Click on device status button or the device to enter the detail view.

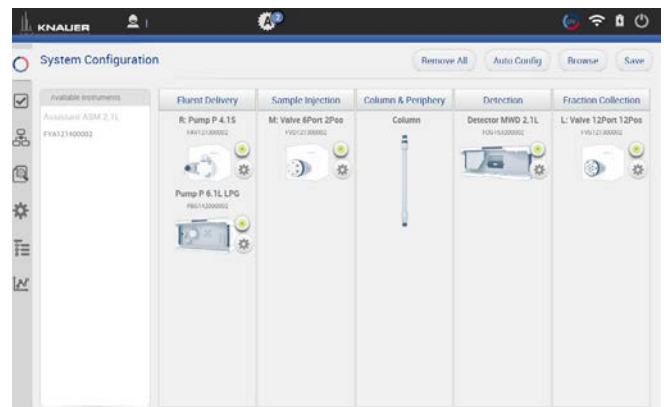


Fig. 5-10 System Overview listed devices



Note: If you want to face more than one system configurations, add new configurations in configuration management (refer to chapter 9.4.1).

5.2.1 Binary HPG (high pressure gradient) configuration of AZURA® P 2.1L pumps

Process

- Go to SYSTEM OVERVIEW > SYSTEM CONFIGURATION.

Figure

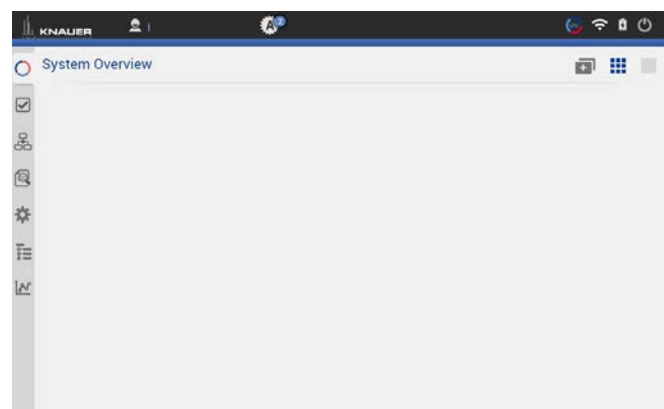


Fig. 5-11 Overview - System Configuration

2. Drag the pump with your finger to the functional blocks and drop it into the eluent delivery.

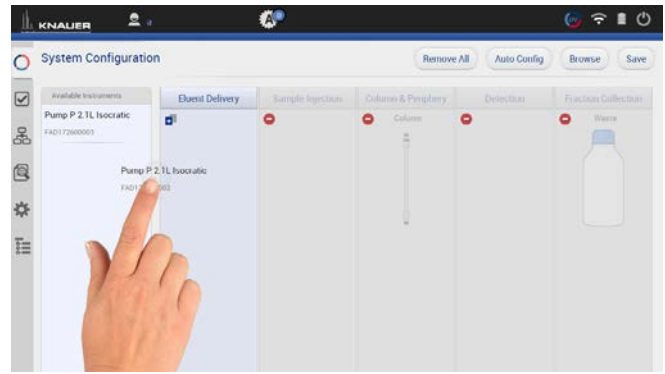


Fig. 5-12 Drag and drop first pump



Note: The pump you shift at first in the functional block is set as HPG A automatically. You can change this setting later in menu Device settings. Refer to chapter 9.2.8.

3. The pump is part of the system configuration.

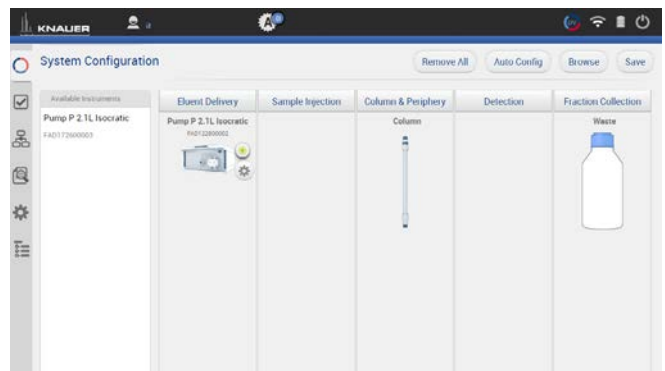


Fig. 5-13 First pump in System Configuration

4. Drag and drop the second pump.
5. The first pump will be highlighted, indicating you can synchronize both pumps. Drop the second pump into the violet „Synchro“ frame.
6. Confirm your action with <Save>.

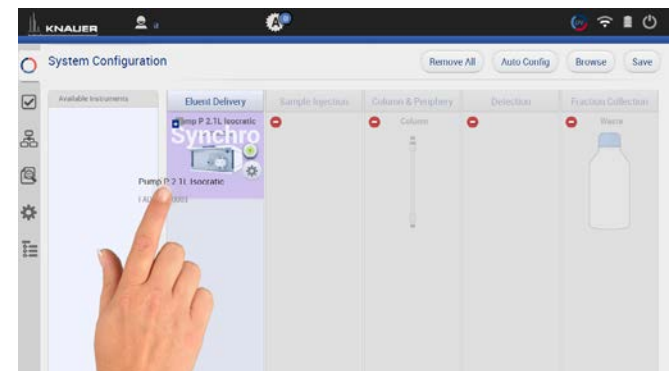


Fig. 5-14 Drag and drop second pump



Note: If you want to add two separate AZURA® pumps P 2.1L, drag and drop the second pump below the „synchro“ widget.

7. A message confirms the setup of the Binary HPG pump.



Fig. 5-15 View of the synchronized pumps

8. Go to SETTINGS to edit/view the device settings of the synchronized pumps (also refer to chapter 9.2.8).



Note: Setting a Binary HPG of two compact pumps AZURA® P 2.1S/P4.1S is not supported.

5.2.2 Synchronous switching of two valves

Synchronous valve switching enables for example column selection or sample loop selection.

You can synchronize valves of the same type, e.g. 2x 6 Multiposition valves or 2 x 6 port 2 position valves. You can synchronize valves of the same type, which have the same number of position.

Synchronization of valves works for block:

- Sample Injection
- Column & Periphery



You can synchronize valves inside an assistant or stand-alone valves, but you cannot synchronize a valve inside an assistant with a stand-alone valve.

Process

1. Go to SYSTEM OVERVIEW > SYSTEM CONFIGURATION.
2. Click <Browse> to get a list of all connected devices.

Figure

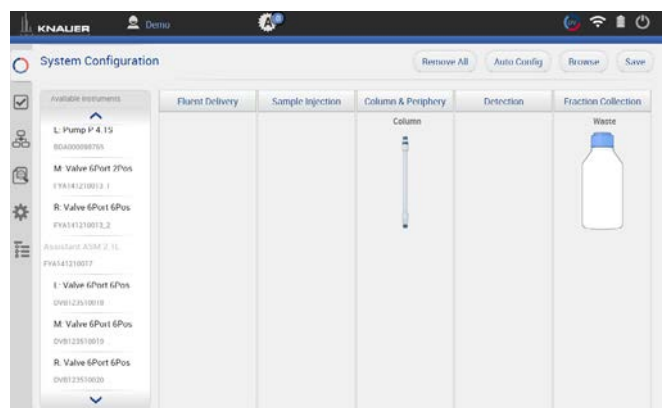


Fig. 5-16 Enter System Configuration

3. Drag and drop the first valve in the appropriate column.

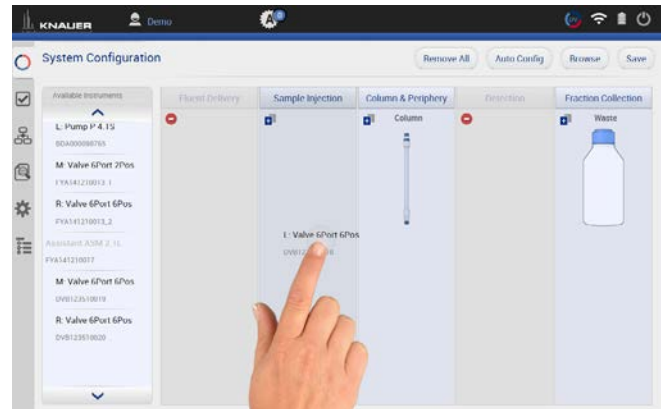


Fig. 5-17 Addition of a valve

4. The valve is part of system configuration.

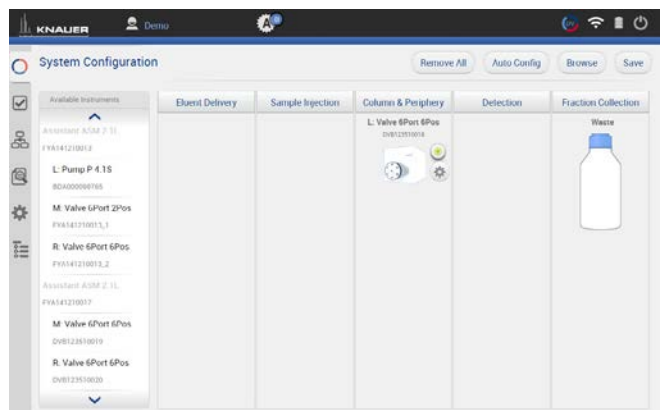


Fig. 5-18 Configured valve

5. Drag and drop the second valve. The first valve will be highlighted, indicating you can synchronize both valves. Switch the second valve into the violet „Synchro“ frame.

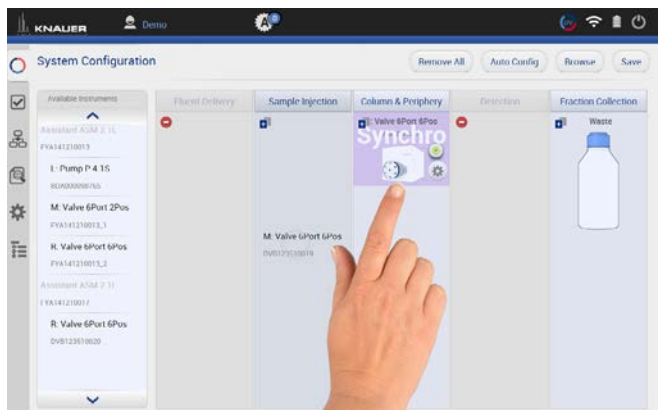


Fig. 5-19 Drag and drop of the second valve



Note: If you want to add 2 independent valves, drag and drop the second valve below the „synchro“ widget.

6. Always confirm your settings with <Save>.

7. Tap on the device symbol to enter the detail view.

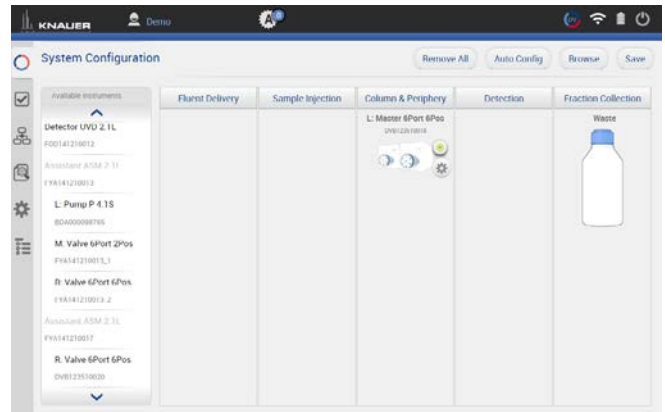







Fig. 5-20 View of the synchronized valves

5.3 Device status

Device Status	Ready	Running	Busy	Error	Standby
Color of the light					

5.4 Detail View

The Detail View is entered by clicking on the widget of the desired device in the System Overview. In the Detail View you can directly control the device and read its parameters.

5.4.1 User interface

Process

1. Go to SYSTEM OVERVIEW.
2. Click on device status button or the device to enter the detail view.

Figure

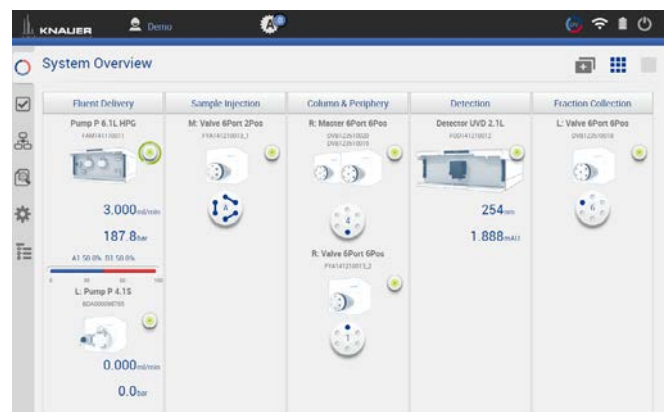


Fig. 5-21 System Overview - listed devices

Legend

- ① Apply
- ② Cancel
- ③ Return to System Overview
- ④ Refreshes the data
- ⑤ Device status and important parameters
- ⑥ Run
- ⑦ Standby
- ⑧ Shifts to previous device
- ⑨ Shifts to next device

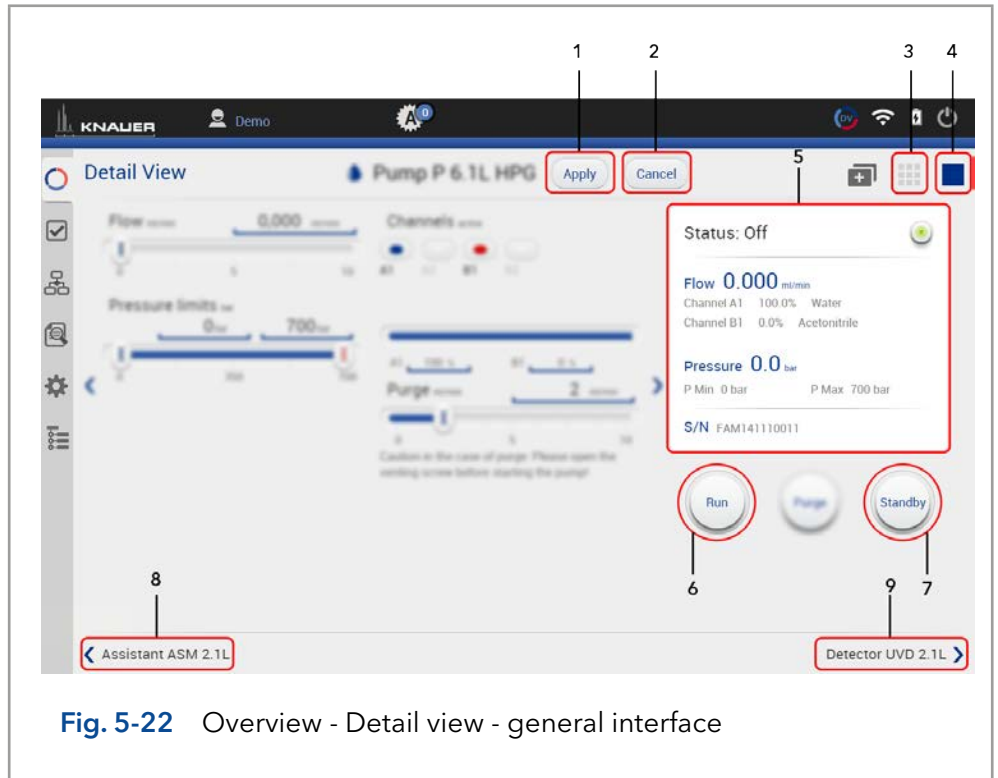


Fig. 5-22 Overview - Detail view - general interface



Practical tip: Parameters in the upper right device status frame are sent directly from the device (real time).



Note: Always confirm your settings with <Apply>.

5.4.2 Assistant


The picture below shows an example for a configuration of an assistant.

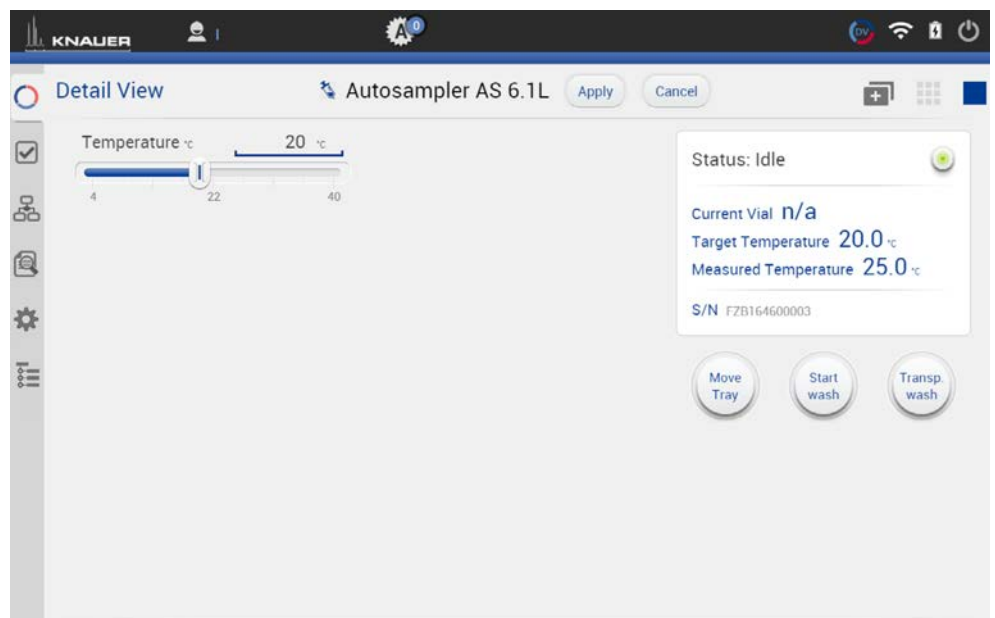


Fig. 5-23 Detail View - Assistant

Possible devices of an assistant:

Pump	
Flow	Set the flow rate by entering the value or with slide control.
Pressure	Set the minimum and maximum pressure by entering the value or with slide control.
Valve	
Position	You can change the position of the valve, by Enter the position or click on the position of the valve on the display.
Detector	
Wavelength	Tap the text field and enter the required value. You can also adjust the value by slide control.
Deuterium lamp	Choose between ON/OFF.
Events	
(from supported devices)	Events can be manually activated. They operate external devices (refer to the instructions of the respective device for more information) Choose between ON, Pulse or OFF.


Note: Events of the assistant cannot be triggered in programs.

5.4.3 Autosampler**Fig. 5-24** Detail view - Autosampler

Temperature	Set the temperature by entering the value or with slide control (if temperature control is installed).
--------------------	--

Move tray	The tray is moved to front or back (enter or remove vials).
Start wash	The autosampler starts a wash cycle to wash the needle.
Transp. wash	The autosampler starts a wash cycle using the transport liquid to wash the needle with it.

5.4.4 Column thermostat

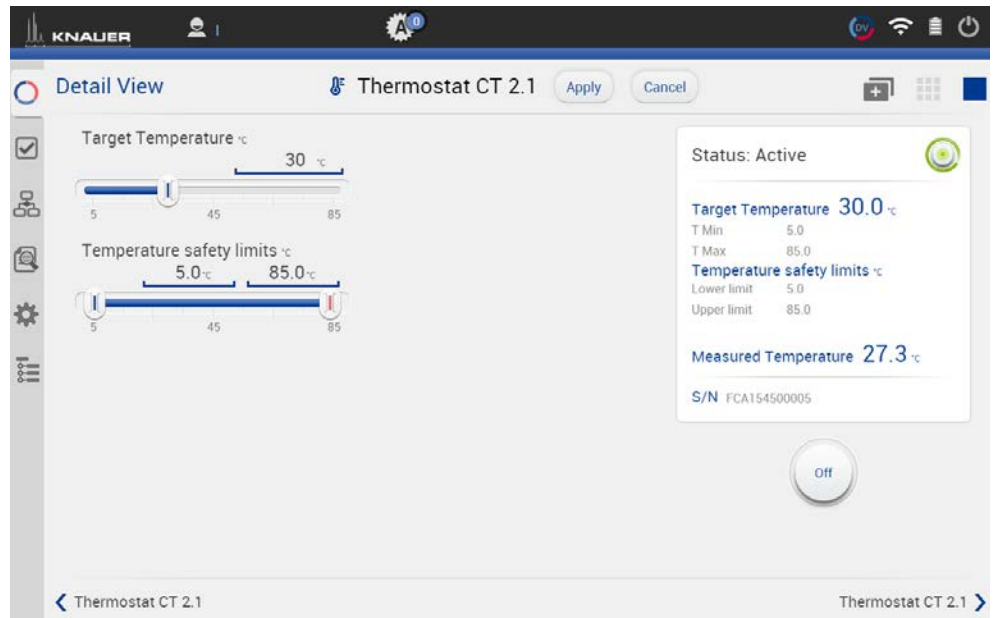


Fig. 5-25 Detail view - Column thermostat

Target Temperature	Choose a temperature within the range of Temperature safety limits. Steps of 1 °C are possible.
Temperature safety limits	Safety limits can be set in the range of 5 °C and 85 °C.

5.4.5 Detector

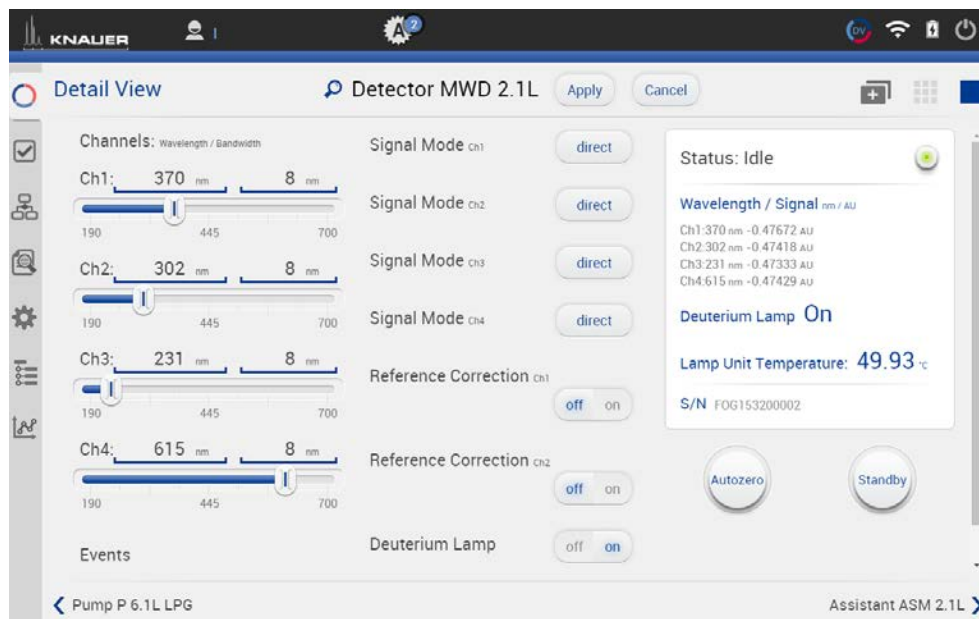


Fig. 5-26 Detail View - Detector

Wavelength

Tap the text field and enter the required value. You can also adjust the value by slide control.

Events (from supported devices)

Events can be programmed or manually activated. They operate external devices (refer to the instructions of the respective device for more information)

Choose between ON, Pulse or OFF.

Signal Mode

Choose between Direct Signal and Inverted Signal.

Direct Signal (+): Displays signal without modifications.

Inverted Signal (-): Displays the inverted signal.

Reference correction (only AZURA® MWD 2.1L, DAD 2.1L and DAD 6.1L)

In order to minimize baseline drift due to refractive index effects, a reference wavelength can be set in order to correct the baseline. The reference should be set in the same spectral region as the signal wavelength (UV or Vis) but at a wavelength at which the analyte has no absorbance.

Deuterium lamp

Choose between ON/OFF.

If the device is in standby mode, the lamp is switched off.

LED (only AZURA® RID 2.1L)

Choose between ON/OFF.

LED of the device can be switched off to prolong the lifetime.



Note: In case of detectors with 2 lamps, both lamps can be switched ON/OFF.(e.g. AZURA® DAD 6.1L).

Flushing the reference cell (only AZURA® RID 2.1L)	The flush function activates the reference cell valve enabling this cell to be purged with eluent. The flush valve can be switched on and off immediately either via software or via analog command; alternatively via software a flush time program can be selected, whereby the valve is switched on and after a selected time span (30 s, 60 s, 120 s, 400 s) the valve is automatically switched off. The flush time program can be interrupted at any time with the off command.
Target temperature (only AZURA® RID 2.1L)	It is possible to select the temperature of the optical unit in the range 30-55 °C in 1 °C steps via software. We recommend to set the temperature 5-10 °C above the ambient conditions, in order to improve and ensure baseline stability.
Autozero	The detector performs an autozero.

5.4.6 Interface Box IFU 2.1 LAN

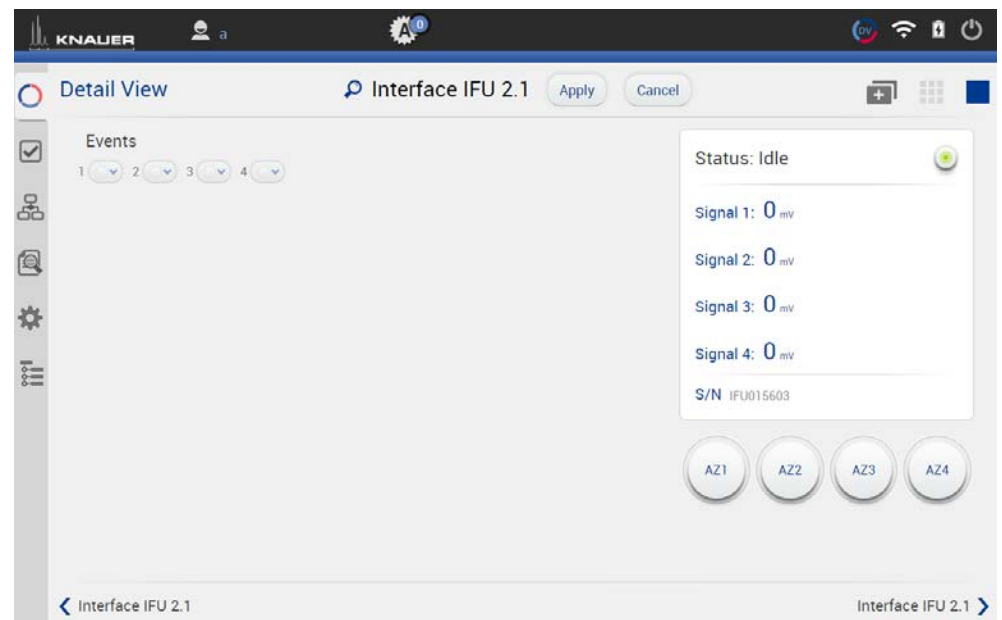


Fig. 5-27 Detail View - Interface Box IFU 2.1 LAN

AZ1 - AZ4	An autozero of the respective channel will be performed.
------------------	--

Events
(from supported devices)

Events can be programmed or manually activated. They operate external devices (refer to the instructions of the respective device for more information)

Choose between ON, Pulse or OFF.

5.4.7 Pump

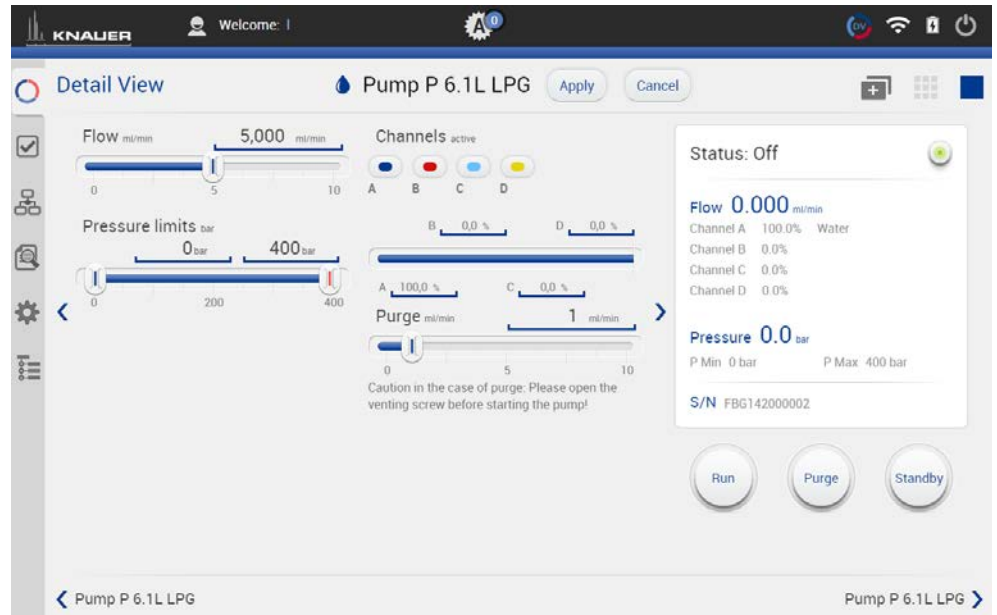


Fig. 5-28 Detail View - Pump

Flow

Set the flow under Flow by entering the value or with slide control. The pump starts running. The pump can be stopped again with the Stop-button in DETAIL VIEW.

Pressure limits

Set the minimum and maximum pressure under Pressure limits and confirm with <Apply>. Minimum and maximum pressure is set with 2 slide controls or via the text field.

Minimum pressure: The pump switches off after 30 seconds, if the pressure goes below the minimal pressure limit. This may be the case, if a leak is occurred or air bubbles are in the system.

Maximum pressure: To protect the column, the pump switches off immediately, if the pressure exceeds the maximum pressure limit, e.g. in case of clogging or an excess flow rate.

Gradient

If a gradient-compatible pump or pump combination has been connected, the gradient can be set under Detail View. Some pumps have to be configured as gradient pump under Settings > Pump (refer to chapter 9.2.7).

Purge

Use this function, to remove air from the pump head or to change the solvent.

1. Open the venting screw at the pressure sensor to prevent a pressure surge and damage to the column.
2. Enter the flow under Purge.
3. Press <Purge>.

Refer to the corresponding pump instruction for further informations.

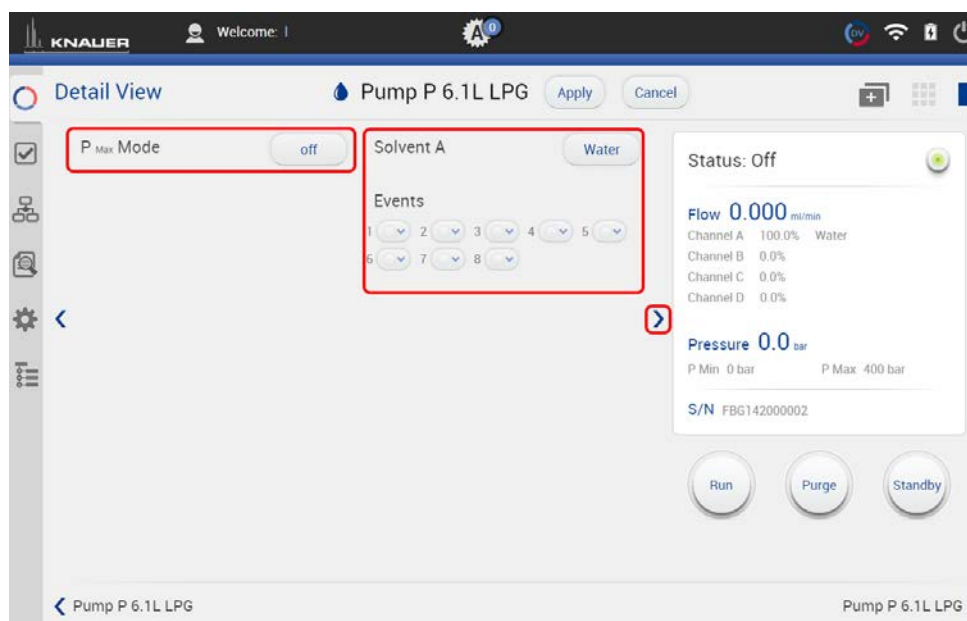


Fig. 5-29 Detail View - PMax Mode and Solvent Factor

Solvent factor



Use the blue arrow on the middle right side of the screen to switch to further settings. Select the solvent channel A,B,C or D and the solvent. For other solvents, than listed select the text field in last row of the list and enter the factor of compressibility for a user defined solvent.

In LPG mode, you can only select one solvent factor, even the eluent consists of more than one solvent.



Note: Solvent factor can only be entered for the AZURA® pumps P 6.1L and P 2.1L.

PMax Mode

This function is only supported by AZURA® pump P 6.1L. It enables settings which determine how the pump reacts when maximum pressure is reached.

If PMax Mode is activated, the pump continues to run with set pressure. The flow is adjusted in order to keep the pressure. The maximum flow should be normally in the range of your current target flow to prevent enormous eluent consumption during leakage.

Switch the PMax Mode on and enter the maximum flow. Confirm your settings with <OK>.

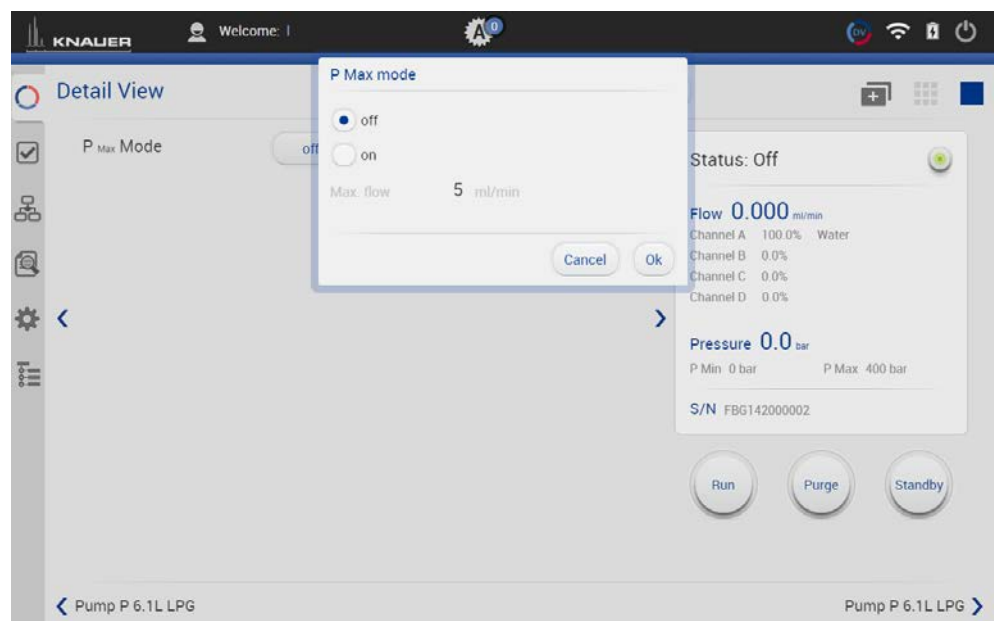


Fig. 5-30 Activation of PMax mode

Events
(from supported devices)

Events can be programmed or manually activated. They operate external devices (refer to the instructions of the respective device for more information)

Choose between ON, Pulse and OFF.

5.4.8 Valve

5.4.8.1 2 position valve



Fig. 5-31 Detail View - Example 6 port 2 position valve

Position

Choose between Load and Injection.

Confirm your setting with <Apply>.

You can also touch the valve and change the position.

5.4.8.2 Multiposition valve

Both valves are switched synchronously, either via position text field or via <Prev>/<Next> buttons.

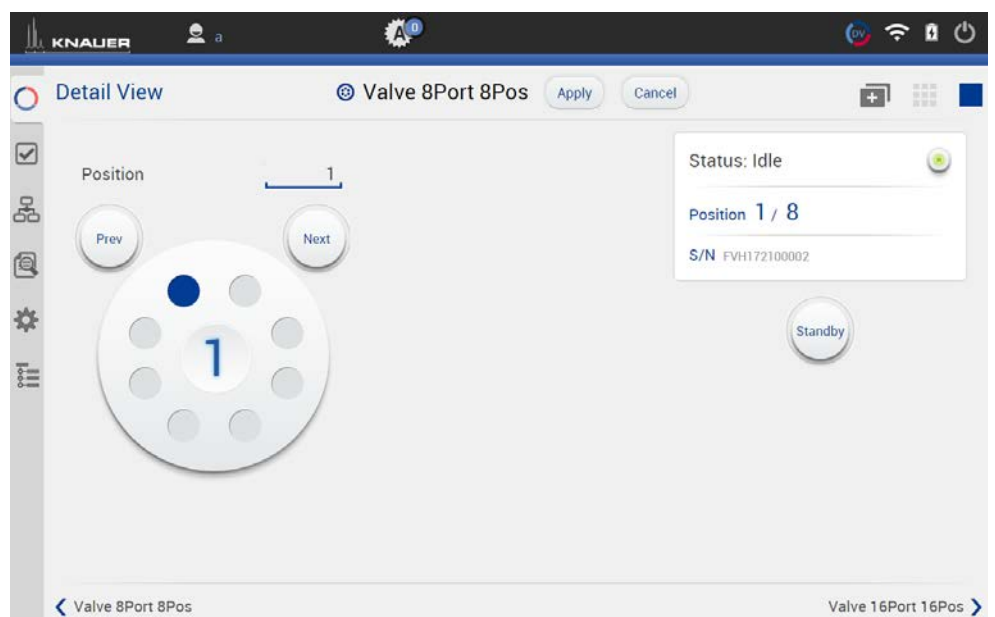


Fig. 5-32 Detail view - Example multiposition valve

Position	Enter a position or touch the corresponding port of the valve and change the position. Confirm your setting with <Apply>.
Prev/Next	Position will be switched to the previous or next possible position of the valve.

5.4.9 Synchronized switching

Both valves are switched synchronously, either via position text field or via <Prev>/<Next> buttons.

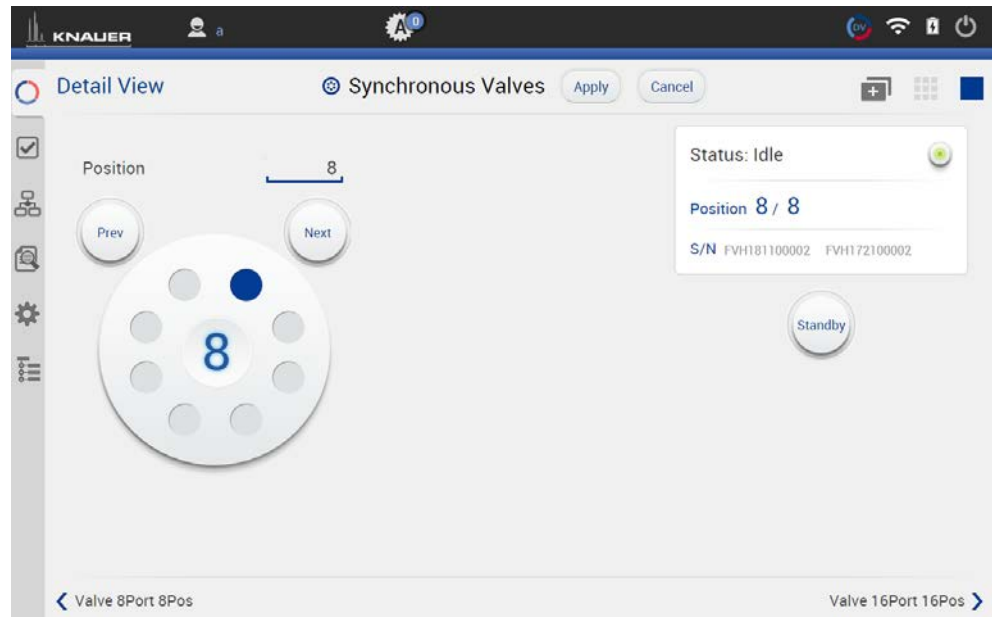


Fig. 5-33 Detail view - Example synchronized valves

Position	Enter a position or touch the corresponding port of valve and change the position. Confirm your setting with <Apply>.
Prev/Next	Position will be switched to the previous or next possible position of the valve.



Note: For synchronization of the valves, refer to chapter 5.2.2.



6. Program & Sequences

In this menu you can create your individual programs and add them up to a complete sequence.



Note: Mobile Control saves by default all result files in C:\Mobile Control\Projects\Project folder*\Results\Queue_date_time.
* The project folder is named default or can be renamed in Mobile Control settings > user management.

6.1 General interface

Legend

- ① **Programs:**
All programs are listed.
- ② **Sequence:**
All sequences are listed.
- ③ **Sorting:**
Sorting of programs or sequences according to date or name.
- ④ Add a program or sequence or import a program.
- ⑤ Send the selected program or sequence in the run queue.
- ⑥ Load the selected program.
- ⑦ Show entries of the audit trail.
- ⑧ Several functions like preview run, program editing, exporting... are summarized.

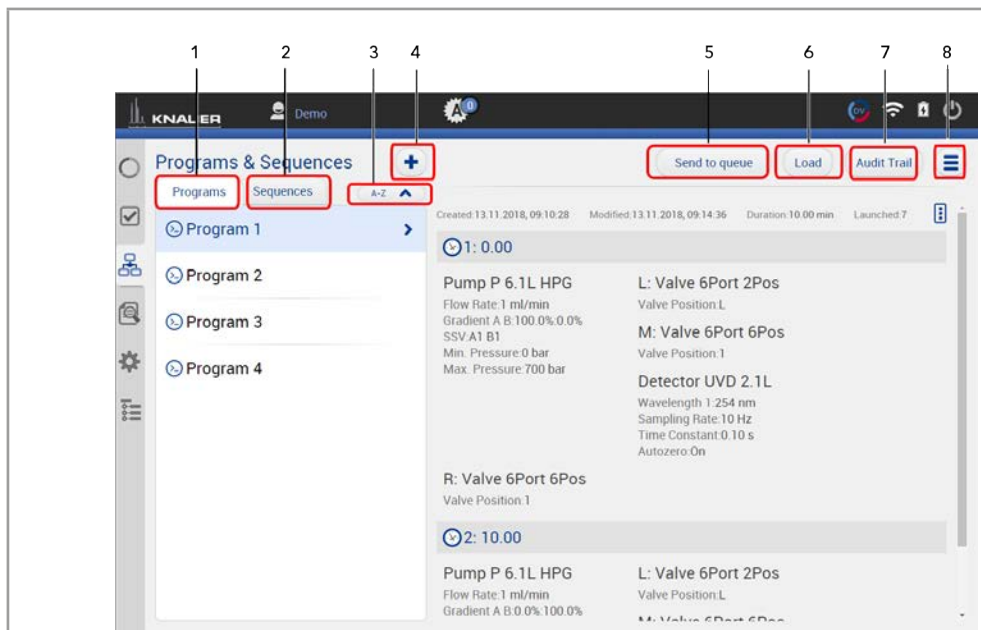


Fig. 6-1 General interface

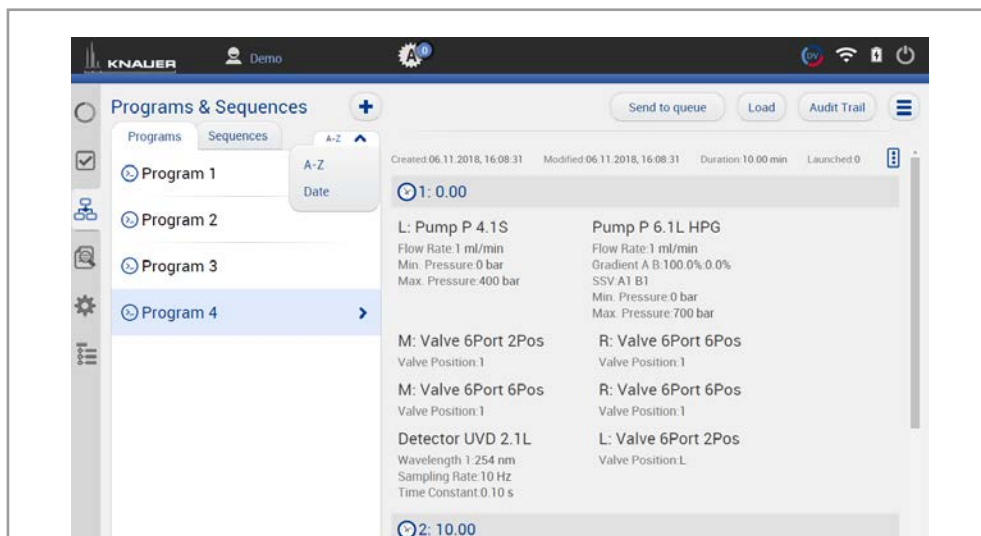


Fig. 6-2 Order of programs

Programs can be sorted either in alphabetical order or by date of creation. Push the button a second time to change the order of programs.

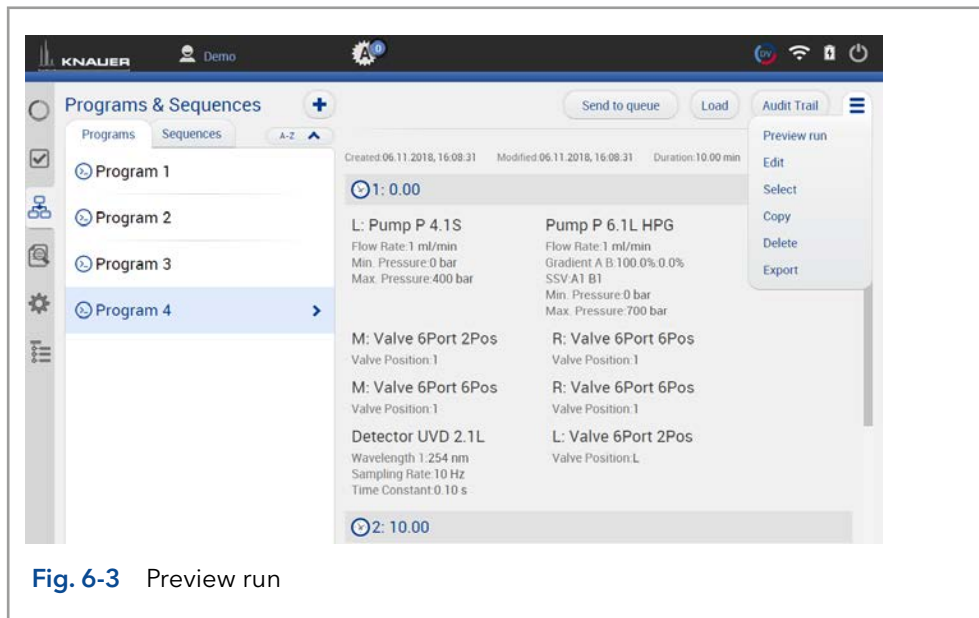


Fig. 6-3 Preview run

By pushing “preview run” the first program line of all devices will be executed. This allows to check if all devices are running as expected or equilibrate the LC system. The maximum duration of preview run is 4 hours but can be stopped manually. Edit the selected program. Select several programs to edit, delete or export them.

Legend

- ① **Add program:**
Create your own program and edit all settings.
- ② **Add sequence:**
Create a sequence by adding programs.
- ③ **Import:**
Import Mobile Control programs. Data format is *.mcp.

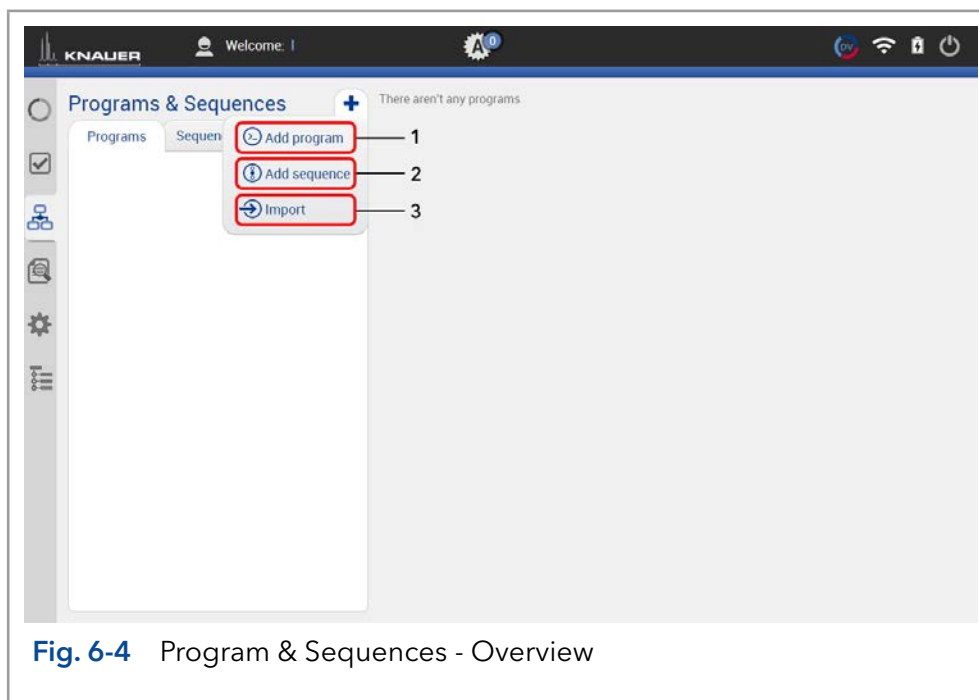


Fig. 6-4 Program & Sequences - Overview



Note: If you import a program from another Mobile Control, ensure that the configuration of your system is identical.

6.2 Program interface

Legend

- ① Settings (refer to chapter 6.3)
- ② Eluent Delivery (refer to chapter 6.4)
- ③ Sample Injection (refer to chapter 6.5)
- ④ Name the program
- ⑤ Detection (refer to chapter 6.6)
- ⑥ Fraction Collection (refer to chapter 6.7)
- ⑦ Save the program
- ⑧ End input without saving
- ⑨ Add a program line, it is always a copy of the previous line.
- ⑩ Add a command/property
- ⑪ Delete program line

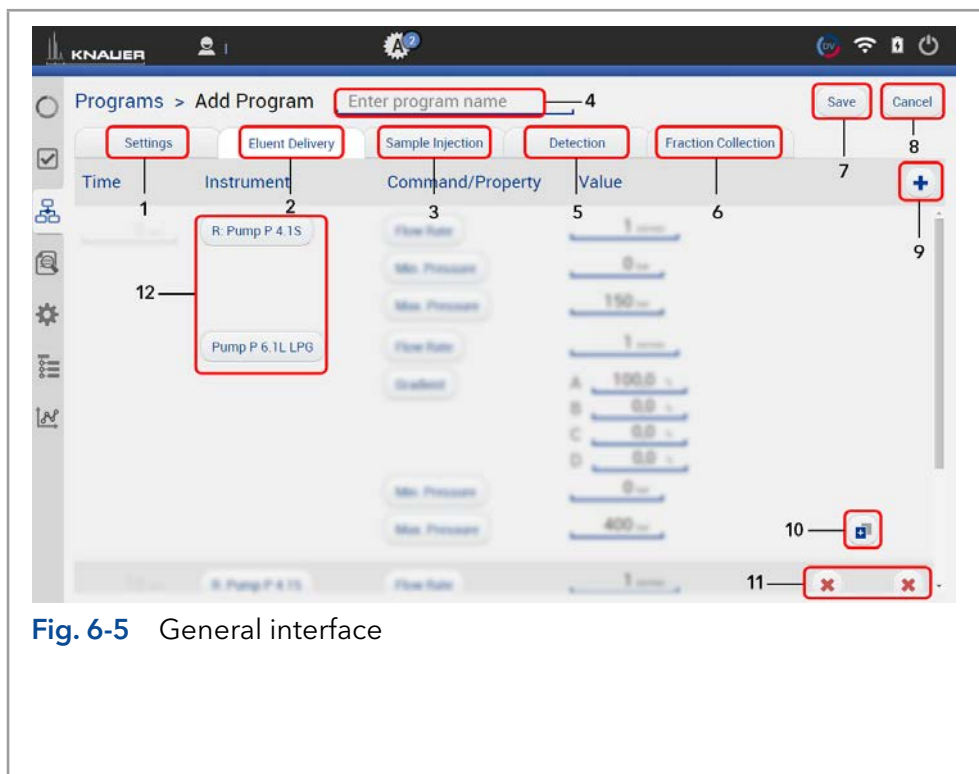


Fig. 6-5 General interface

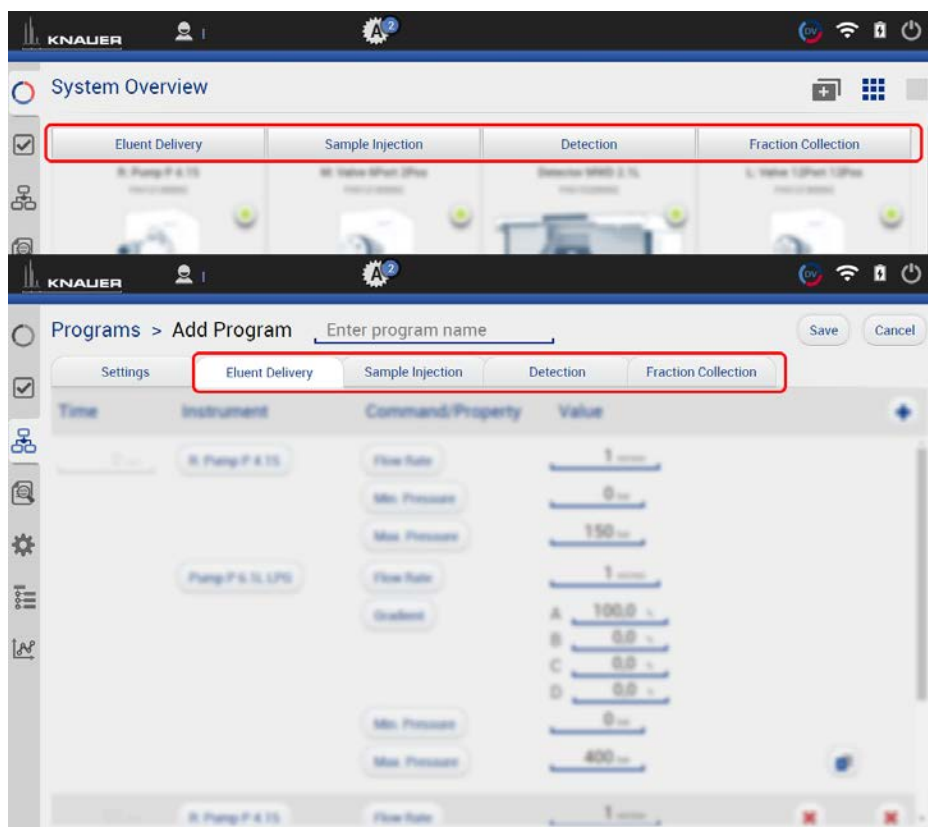


Fig. 6-6 Arrangement of the device components



Practical tip: For easier handling, all device components in the menu „Programs“ are arranged in the same way as the tabs in menu „System Overview“.

6.3 Settings

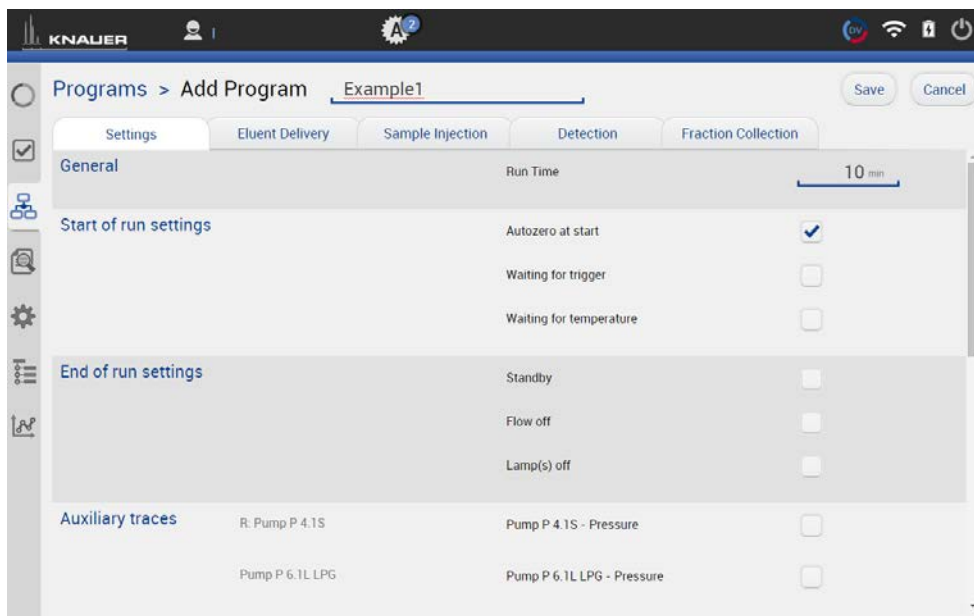


Fig. 6-7 Add a program - example for settings

Start of run settings

Autozero at start Performs an autozero at the start of the program if activated.

Waiting for trigger Starts the run not until a signal was sent from an external device e.g. injection valve.

Waiting for temperature Starts the run not until a defined temperature is reached. Start temperature can be defined in the column thermostat CT 2.1 or in the RI detector RID 2.1L.

End of run settings

Standby All devices go in standby mode after the run.

Flow off Flow of the pump is automatically switched off after the run.

Lamp(s) off Lamp of the detector is automatically switched off after the run.

Auxiliary traces

Autosampler - Temperature

Column Thermostat - Temperature

Detector (AZURA®RID 2.1L, DAD 2.1L/6.1L, MWD 2.1L) - Temperature

Pump - Pressure, Flow rate in isobar/constant pressure mode

Valve - Position

Reports

System Configuration Choose the components, which should be displayed in the system report.

Method

Results

Integration parameters

Integration off Activate the checkbox to edit integration parameters.

Negative Peaks

Threshold

Width

Minimum area

6.4 Eluent Delivery

Legend

- ① **Time**
Enter point of time
- ② **Instrument**
Select device
- ③ **Command/Property**
Select parameter
- ④ **Value**
Enter value

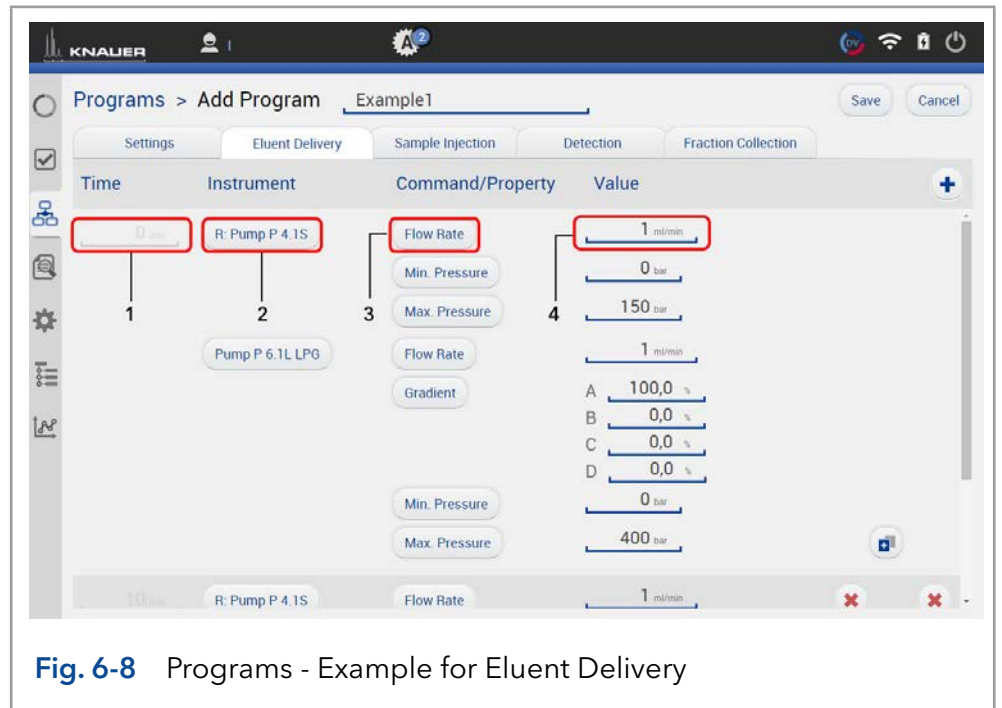


Fig. 6-8 Programs - Example for Eluent Delivery

6.5 Sample Injection

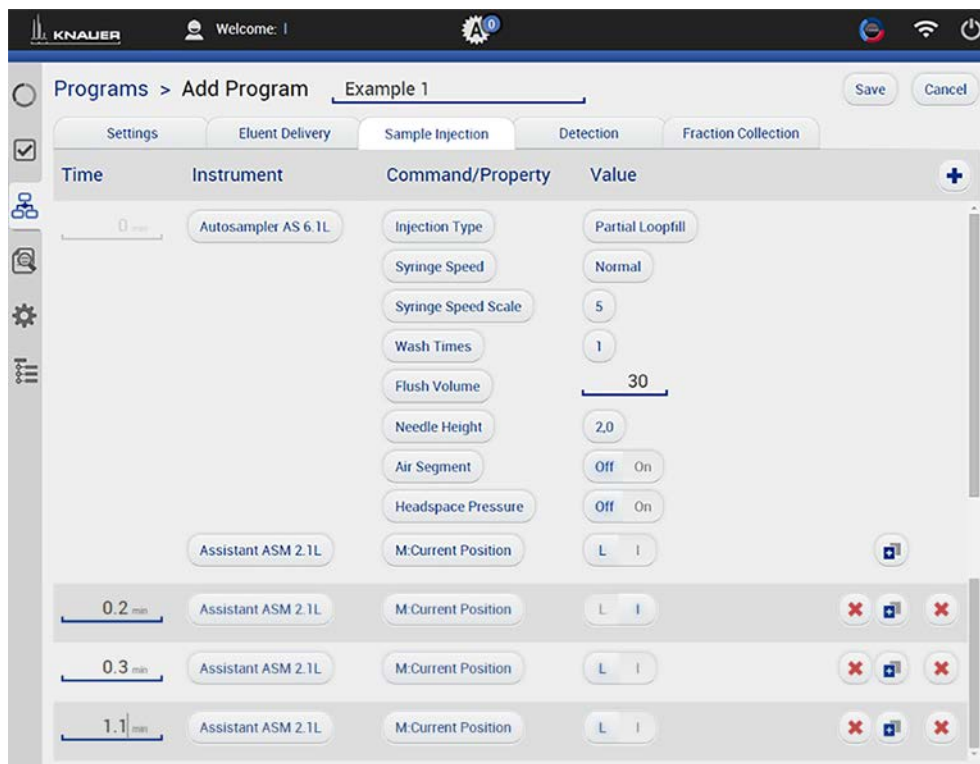


Fig. 6-9 Programs - Example for Sample Injection

6.6 Detection

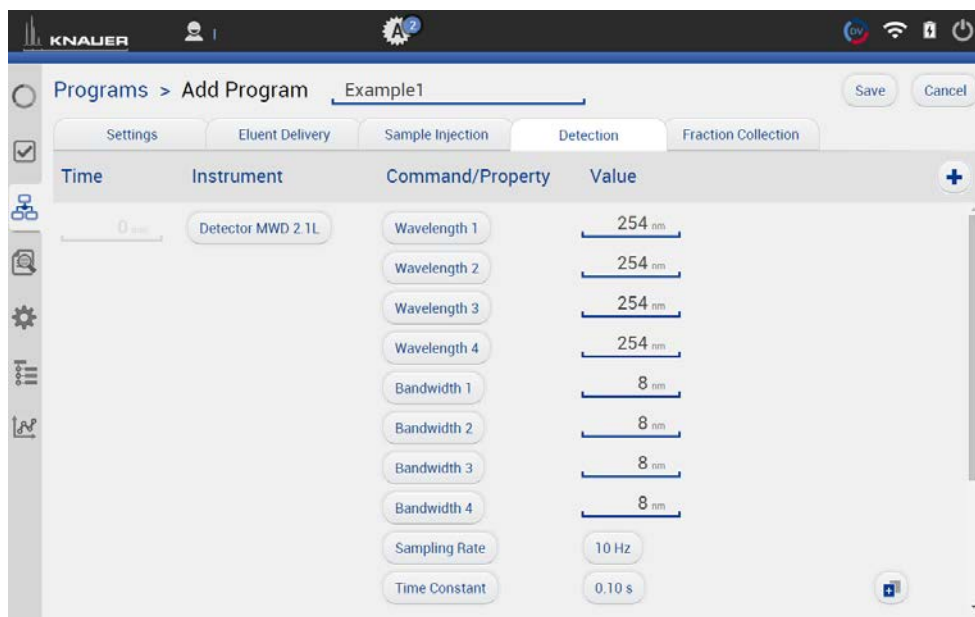


Fig. 6-10 Programs - Example for Detection

6.7 Fraction Collection



Only one multiposition valve can be addressed as fraction collection valve. Cascading of several valves is not supported.

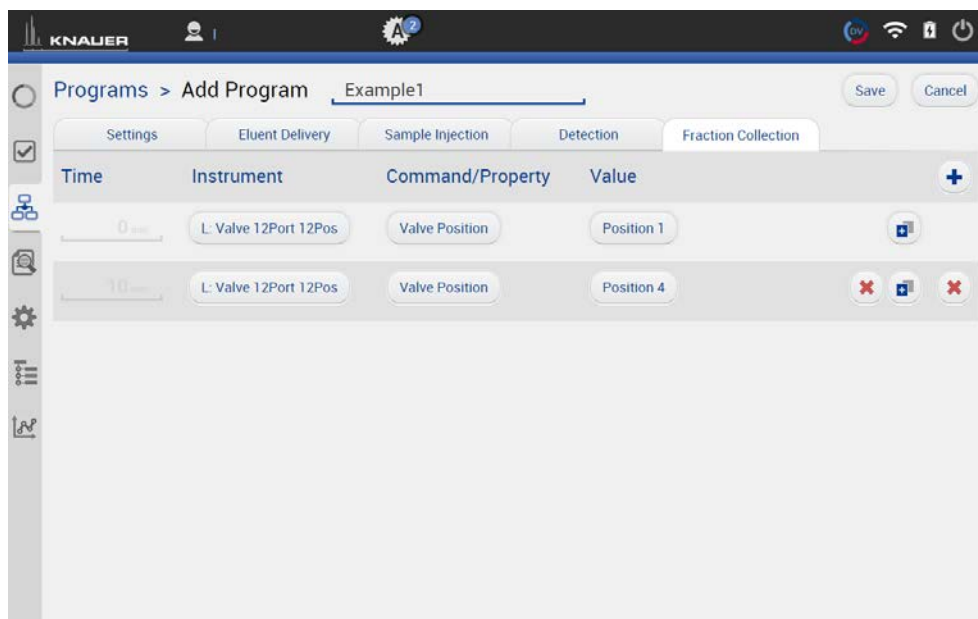


Fig. 6-11 Programs - Example for Fraction Collection

6.8 Add a program

Process

1. Go to PROGRAM & SEQUENCES.
2. Select <+> and tap „Add a program“.
3. Name your program.
4. Begin with „Settings“ and set all required parameters according to chapter 6.3 until 6.7 for correct adjustment.
5. Confirm your settings with <Save>.
6. You will be directed to the overview page.

Figure

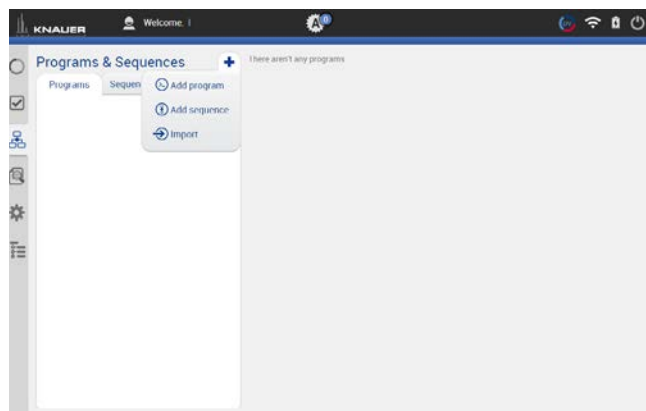


Fig. 6-12 Add a program



Note: Special characters are not supported in the program name.

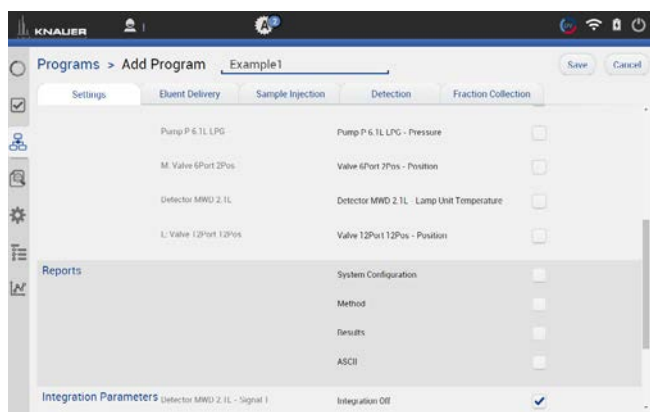


Fig. 6-13 Settings

You can program an automatically stop of pump and lamp of the detector after finished measurement. Scroll down to END OF RUN SETTINGS and activate the required checkboxes.

7. Confirm your settings with <Save>.



Note: In a series of programs we recommend to deactivate the checkboxes for switching off the flow and lamp in „End of run settings“. Only for the last program the end of run settings are activated.

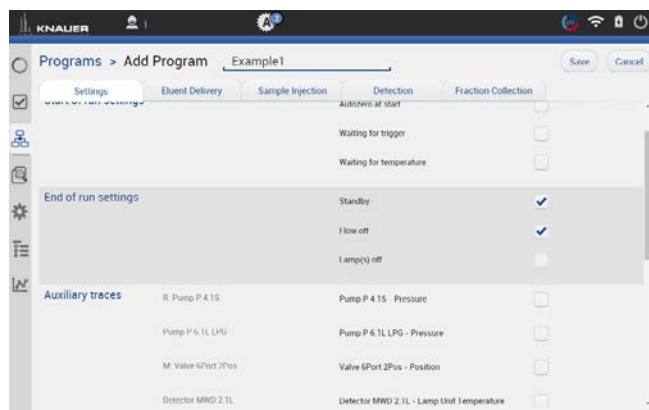


Fig. 6-14 Example of End of run settings

8. In the program overview all programs are listed. The detailed commands of each program are shown.

9. If you want to change the program, select <Edit> in the upper right menu.

10. To start the program, refer to chapter 6.11.

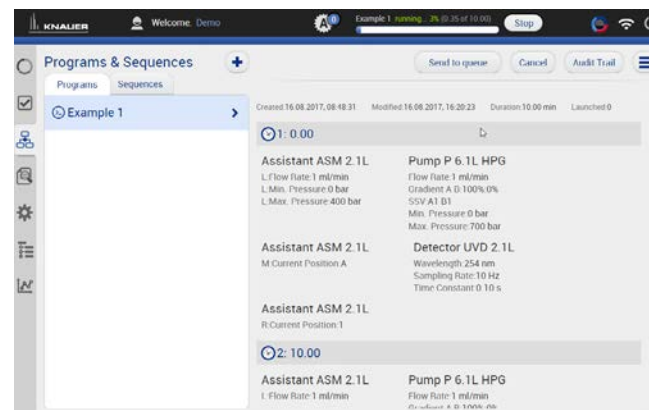


Fig. 6-15 Program - overview

6.9 Export and Import programs



Note: Only programs can be exported or imported. The function does not support sequences. Only exchange programs between systems with the same system configuration. Imported program cannot be loaded on systems with different devices.

Process

Export

1. Go to PROGRAM & SEQUENCES and choose the tab „Programs“.
2. Select the program to be exported and tap <Export> in the upper right menu.



Note: To export more than one program refer to chapter 6.10.

Figure

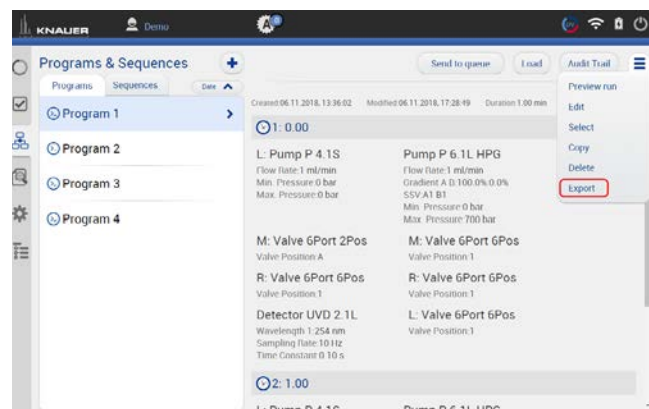


Fig. 6-16 Exporting a program

Process

3. The program is exported and saved in C:\Mobile Control\Export:

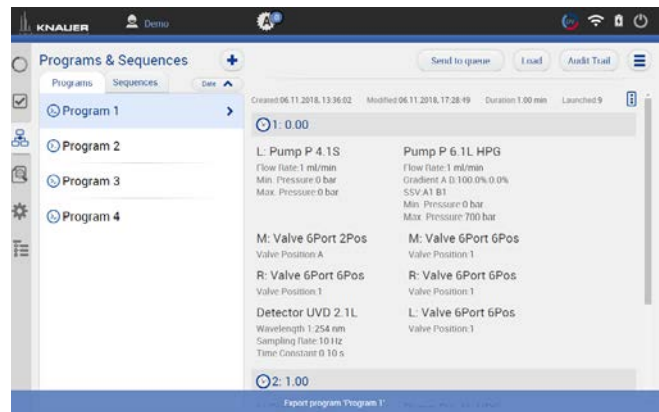
Figure

Fig. 6-17 Exporting one program

Process**Import**

By selecting more than one program several programs can be imported.

1. Go to PROGRAM & SEQUENCES and choose the tab „Programs“.
2. Tap <+> and choose <Import>.

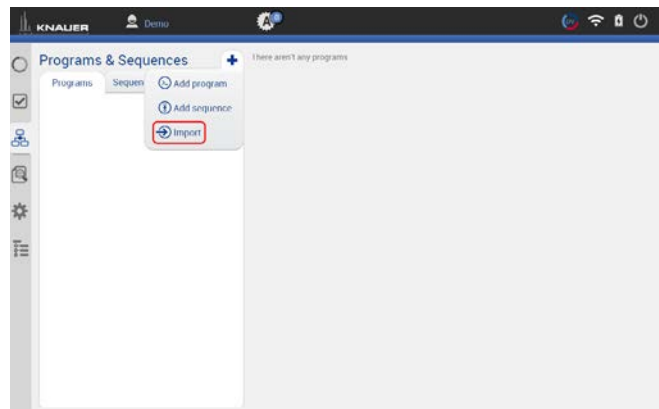
Figure

Fig. 6-18 Importing a program

3. A folder opens. Select the program or several programs to be imported.

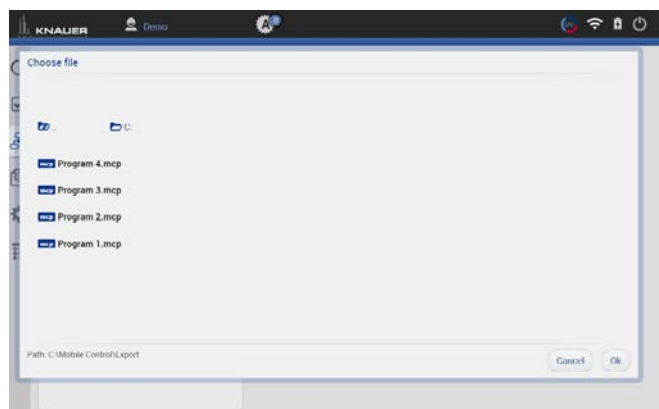


Fig. 6-19 Choosing a file

Process

Figure

4. The programs are imported.

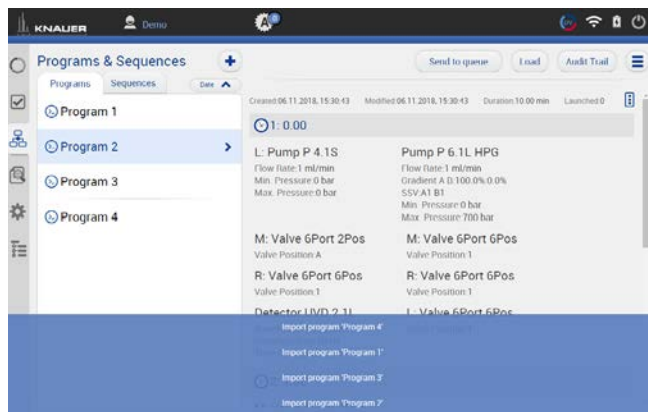


Fig. 6-20 Importing several programs

6.10 Select multiple programs for editing, exporting or deleting

With this feature you can select several programs to export, delete or edit them. The multiple editing function avoids time-consuming editing of each individual program. Consider that only time points which are equal in all selected programs can be changed.

Do not apply edit multiple for running programs. Use this function for example to adjust fraction collection to a shifted retention time of the target peak. The time point of switching the fraction collection valve can be adjusted in all desired programs.

Device parameters like valve position, flow rate or wavelength cannot be changed.



Note: Editing the first and last line of multiple programs is not supported.

Process

Figure

Edit multiple programs

1. Go to PROGRAM & SEQUENCES and choose the tab „Programs“.
2. Tap the upper right menu and choose <Select>.

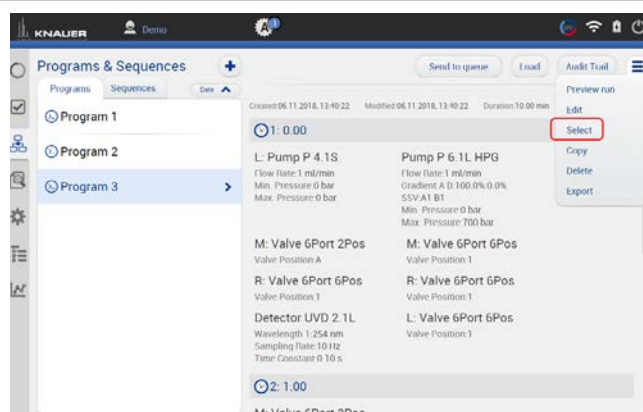


Fig. 6-21 Select multiple programs

Process

3. Select several programs that you want to edit and press <Edit>.

Figure

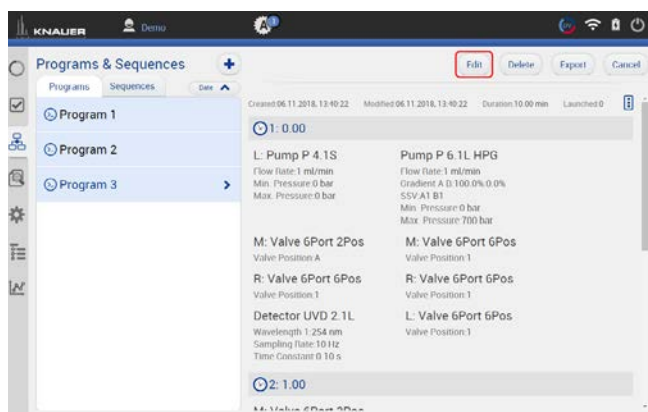


Fig. 6-22 Edit multiple programs

4. To select the instruments you want to edit tap <All instruments>.

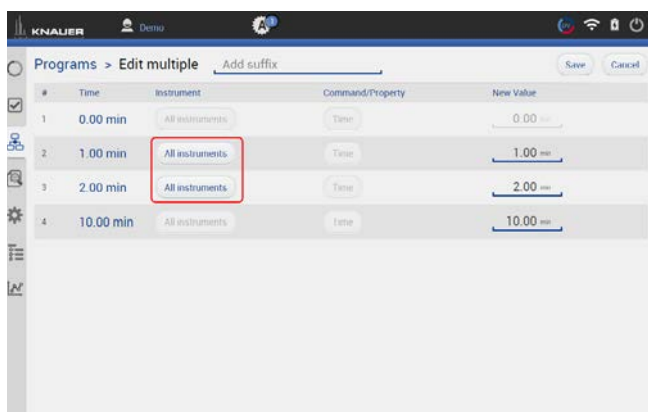


Fig. 6-23 Select instruments

5. Choose the instruments you want to edit and press <Ok>.

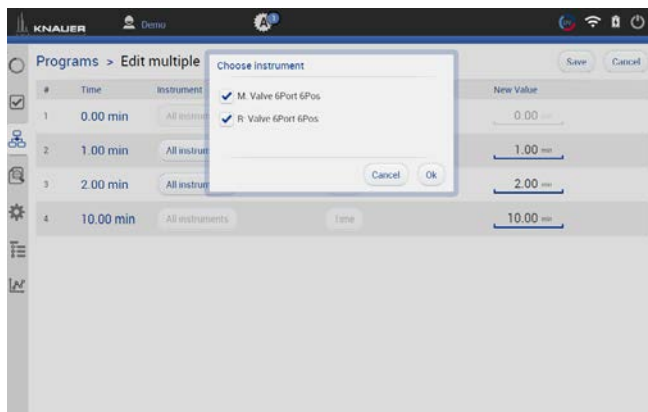


Fig. 6-24 Confirm selection

6. Change the time of the program line you want to adjust. If you enter a suffix the program will be copied with program name+suffix. If nothing is entered the program is overwritten.

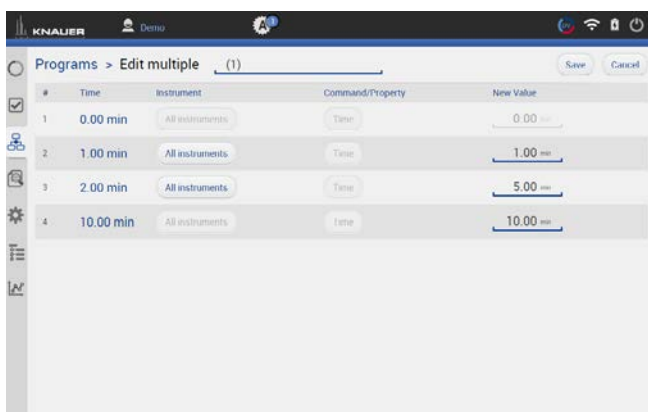


Fig. 6-25 Enter a suffix and adjust the time

Process

Figure

7. Confirm your settings with <Save>.

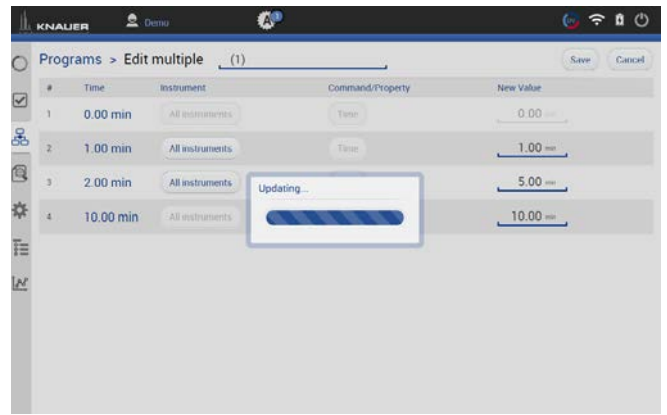


Fig. 6-26 Updating

8. The programs with modified time points have been saved as a copy with the filename + suffix.

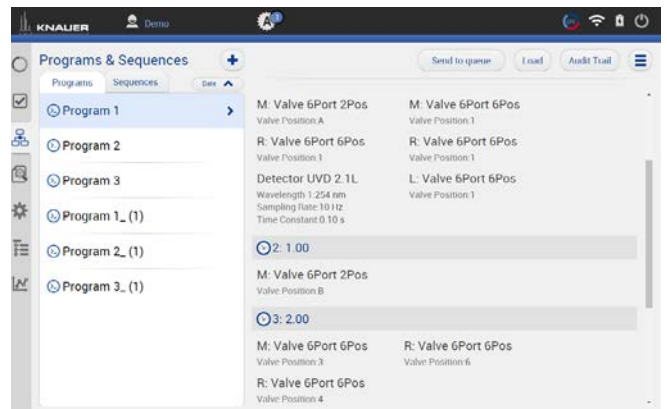


Fig. 6-27 The original program is selected.

9. Program line three has been changed from 2 to 5 minutes.

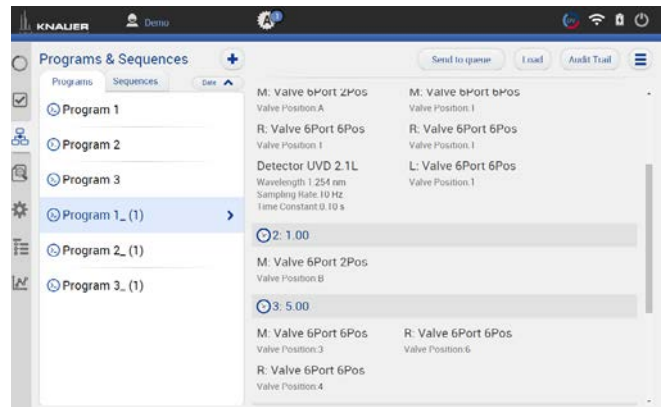


Fig. 6-28 The adjusted program is selected.

Process

Figure

Delete multiple programs

1. Go to PROGRAM & SEQUENCES and choose the tab „Programs“.
2. Tap the upper right menu and choose <Select>.
3. Select the programs you want to delete.
4. Press <Delete>.



Note: Export of several programs works the same way. Instead of delete use the export button.

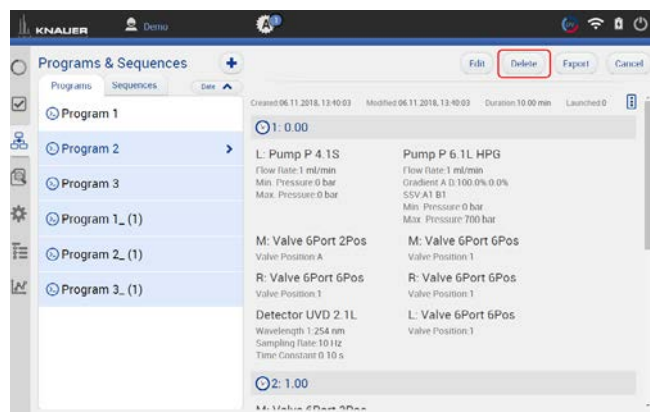


Fig. 6-29 Delete multiple programs

5. Confirm your selection with <Ok>.

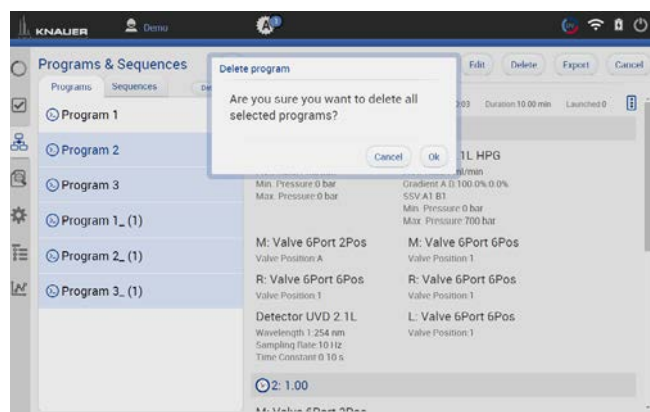


Fig. 6-30 Confirm selection

6. The selected programs have been deleted.

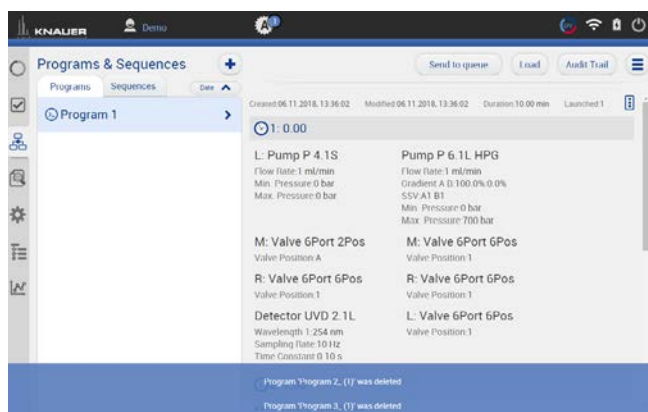


Fig. 6-31 Programs have been deleted.

6.11 Start a program

6.11.1 Starting a single program

Process

Figure

1. Go to PROGRAM & SEQUENCES and choose the tab „Programs“.
2. Press <Load>.

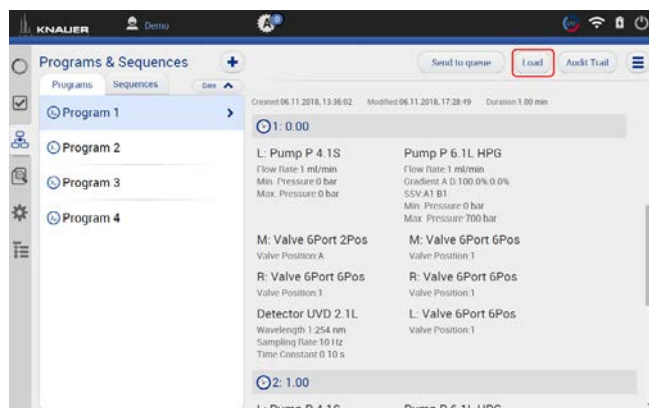


Fig. 6-32 Load the program

3. By clicking you will be directed to a new tab with input fields to enter a sample ID, file name and comment. All entries are saved in the result file and part of the report.
4. Select <Suffix> to name the measurement.

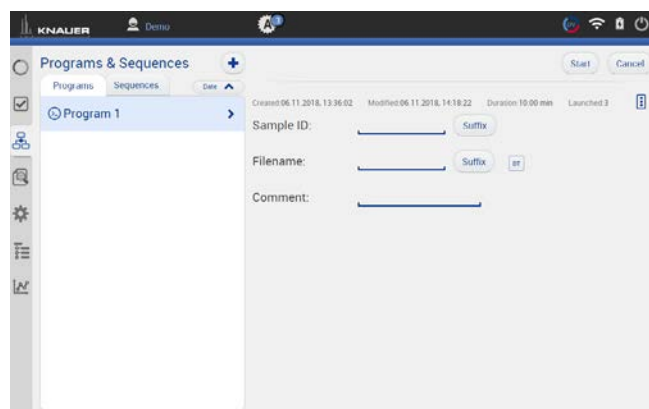


Fig. 6-33 Input before program start

You can choose between:

- Increment Number
- User Name
- Program Name
- Instrument Name
- Date and Time

We recommend to choose „Method Name“ and „Date and Time“.

5. Confirm your selection with <OK>.

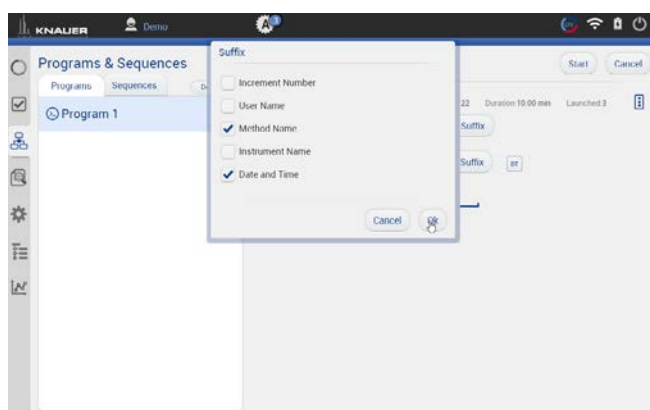


Fig. 6-34 Input for sample ID

6. Select <Filename> to name the file.
To avoid same filename, naming of the run must be individually. We recommend to choose „Program Name“ and „Date and Time“.
7. Confirm your selection with <Ok>.

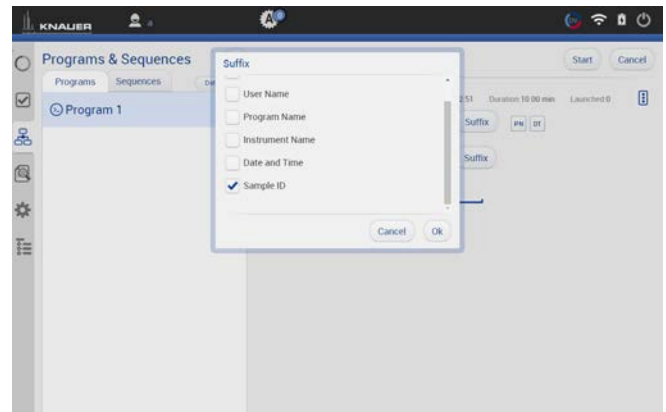


Fig. 6-35 Naming the program

8. If you select <Start>, a new time bar is shown on the upper part of the screen. It shows the name of the program and the progress of the run .
9. You can abort the run by pressing <Stop>.

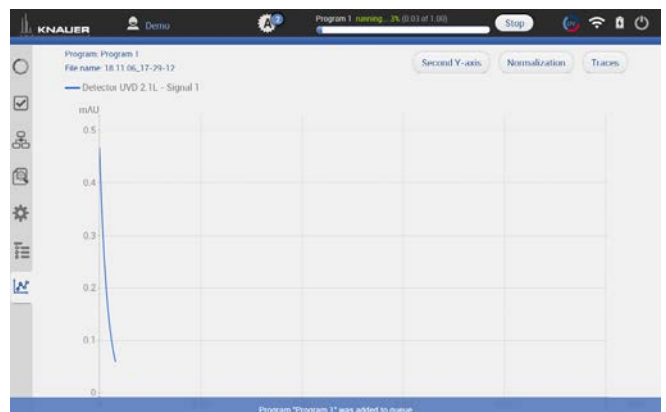


Fig. 6-36 Start the run

10. The program is send to the run queue.
For more information refer to chapter 7 .

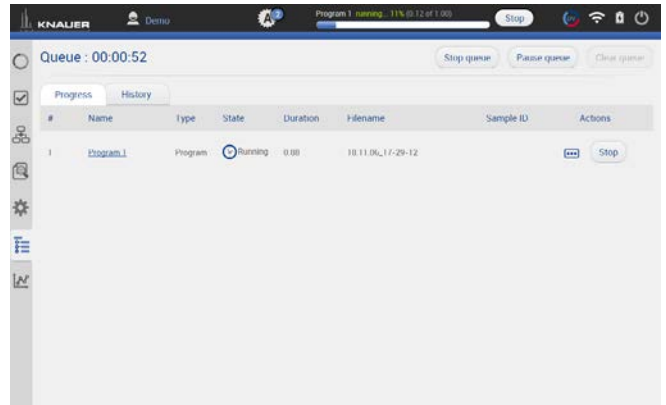


Fig. 6-37 Program in Run Queue

11. If you set a start with external trigger, measurement starts if you press <Trigger> or by release of the signal from a device (e.g. release of manual injection valve).

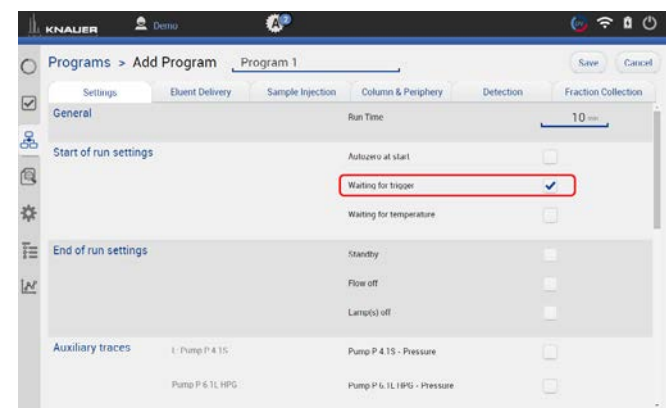


Fig. 6-38 Activate the trigger in program setting

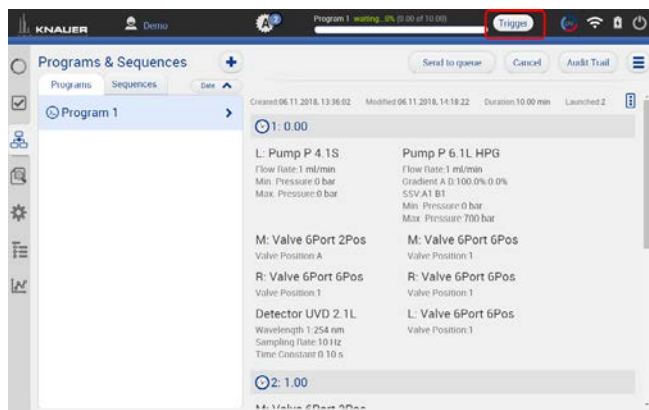


Fig. 6-39 Start a loaded program with the trigger button.

6.11.2 Starting several programs/sequences

Process

Figure

1. Go to PROGRAM & SEQUENCES and choose the tab „Programs“ or „Sequence“
2. Choose the program or the sequence.
3. Select <Send to queue>.

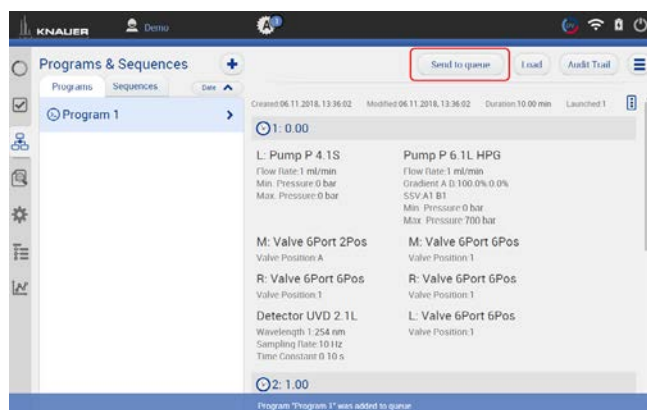


Fig. 6-40 Send a program or sequence into the run queue

4. If you select <Send to queue> you have two further options:
 - a) <Send with high priority> means the sequence will start at first or next if a program is already running.
 - b) <send to the end> means the sequence is inserted at the last position of the run RUN QUEUE.

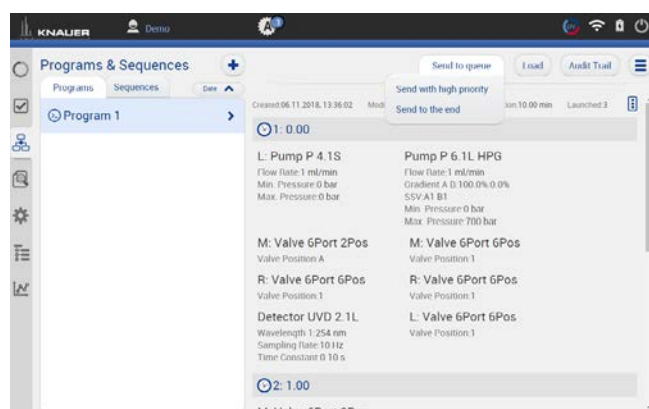


Fig. 6-41 Further options

5. Select the menu RUN QUEUE which shows a list of all added programs and sequences. You can delete or rearrange the order of programs/sequences
6. Press <Start queue> to start the run.

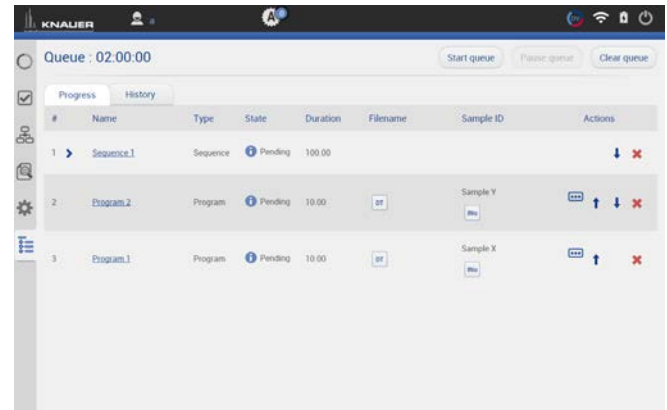


Fig. 6-42 Further options

7. If you select <Start>, a new time bar is shown on the upper part of the screen. It shows the name of the program and the progress of the run.
8. You can abort the run by pressing <Stop>.

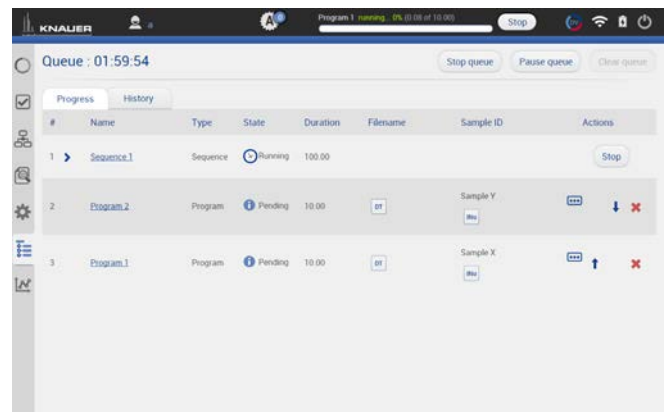


Fig. 6-43 Further options

9. After the successful run, a status message is shown. If reporting is selected in program settings, a second status which shows the report file name, links to the pdf file. If ASCII export is selected, a third status links to the csv file.

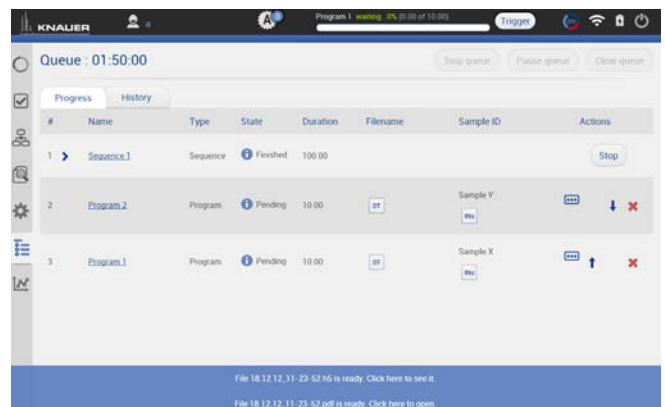


Fig. 6-44 Program is finished and status lines are shown.

6.11.3 Preview run

Process

Figure

Preview run

1. In the preview run the first program line of all devices will be executed. This allows to check if all devices are running as expected to equilibrate the system. The maximum duration of preview run is 4 hours infinite time and must be stopped manually. During a preview run signals from detectors or auxiliary traces will be acquired.
2. The result file is stored in C:\Mobile Control\Projects\Default\Results\preview_run.h5 and is overwritten with every started preview run.

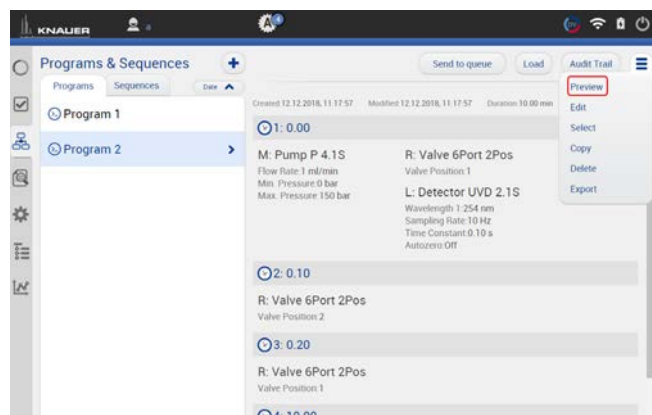


Fig. 6-45 Select preview

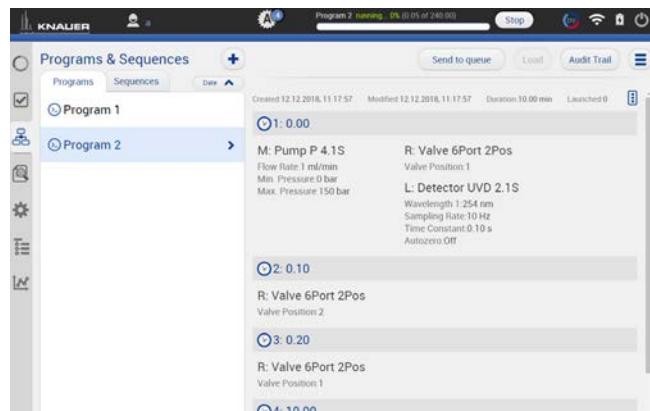


Fig. 6-46 Preview run is started

6.12 Audit trial

Process

The audit trial records all changes in programs/sequences. A list summarizes all altered commands by a user with a timestamp. The audit trial can be activated in the settings of Mobile Control (refer to chapter 9.1.3 Preferences).

If you press <Program> you return to the window with Programs and Sequences.

Figure

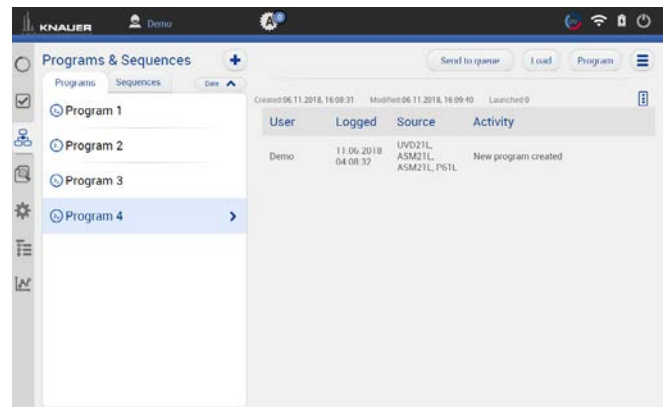


Fig. 6-47 Audit trial

6.13 Add a sequence

Process

1. Go to PROGRAM & SEQUENCES.
2. Select <+> and tap „Add a sequence“.

Figure

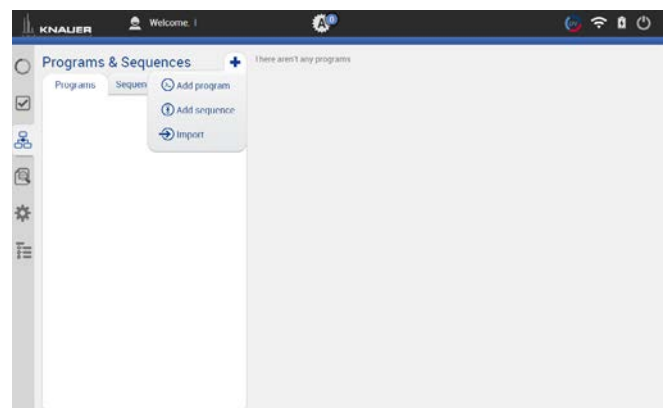


Fig. 6-48 Add a sequence

3. Name your sequence.
4. Click on the <+> Add program to choose one of the existing programs. Further you can add the sample ID, file name, a comment or set the number of repetitions.

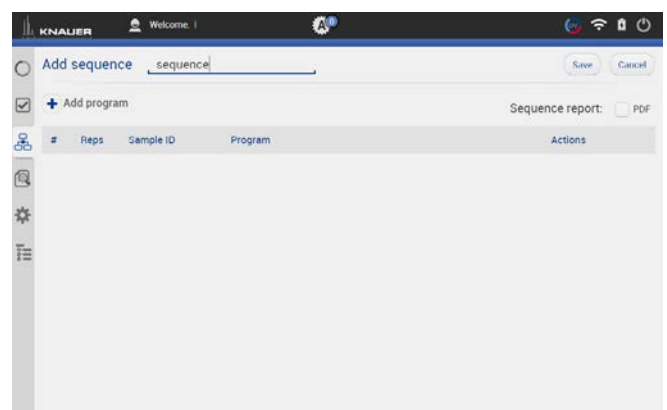


Fig. 6-49 Name a sequence

5. Select the program you want to run first.
You can change the order of programs also at the end.
6. Confirm with <OK>.

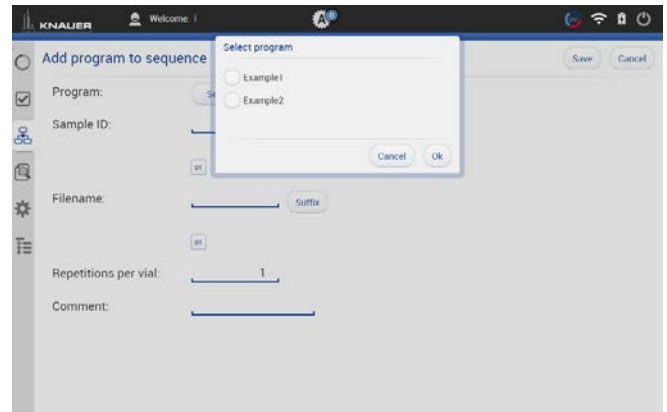


Fig. 6-50 Add program to sequence

7. Name the Sample-ID and select <Suffix>.

You can choose between:

- Increment Number
- User Name
- Program Name
- Instrument Name
- Date and Time

8. Confirm with <.OK>.

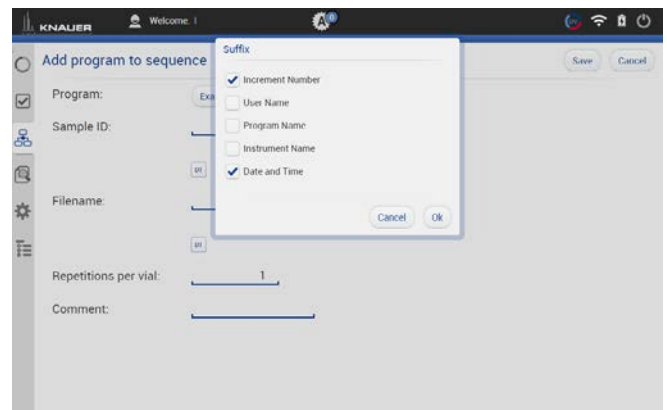


Fig. 6-51 Sample ID

9. Name the Filename and select <Suffix>.

You can choose between:

- Increment Number
- User Name
- Program Name
- Instrument Name
- Date and Time
- Sample-ID

10. Confirm with <OK>.

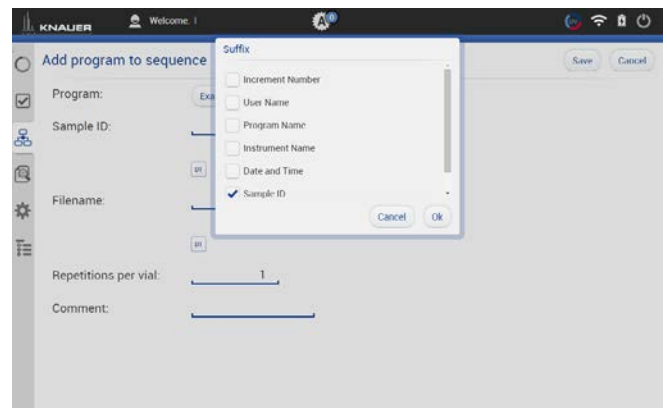


Fig. 6-52 Naming the program

11. Select the repetitions per vial.
12. Confirm your settings with <Save>.
You will be directed to a new window.

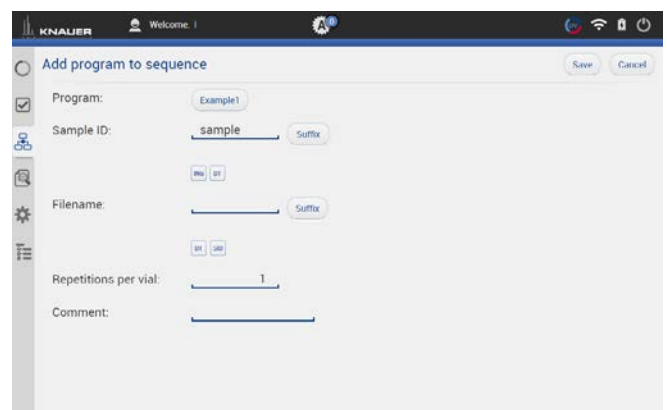


Fig. 6-53 Set repetitions

13. A list summarizes all programs the sequences.
14. Click on the pen symbol to edit the sequence. Click on the red cross to delete the program.
15. Press <Save> to save the sequence.
16. Select the <+> symbol to add the next program. Add the next program.

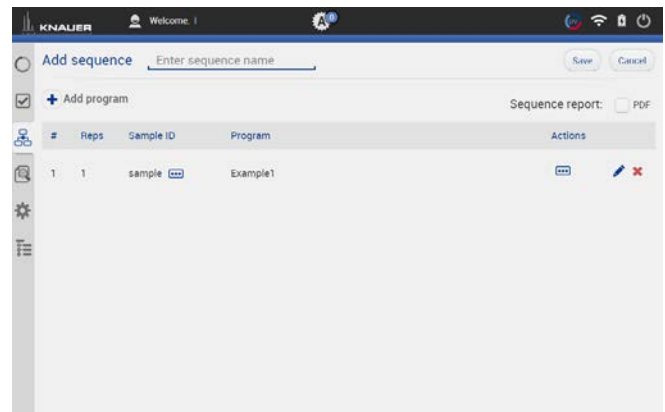


Fig. 6-54 Overview of sequence

17. Select the program.
18. Proceed in the same way as done with first program (Sample naming).

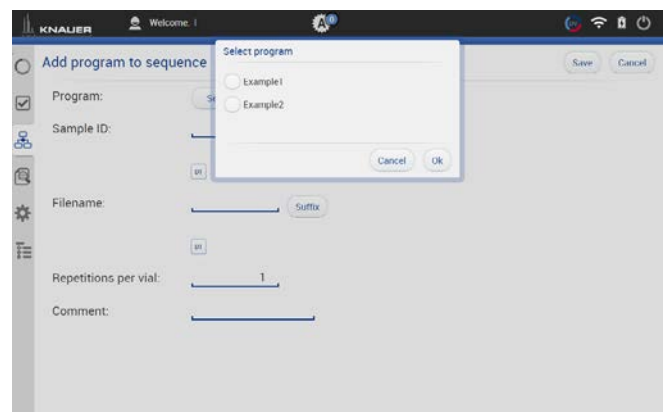


Fig. 6-55 Select a program

19. You see both programs in the list.
20. You can change the order by selecting the arrow on the right side of each row.
21. Activate the check box PDF to create a sequence report.

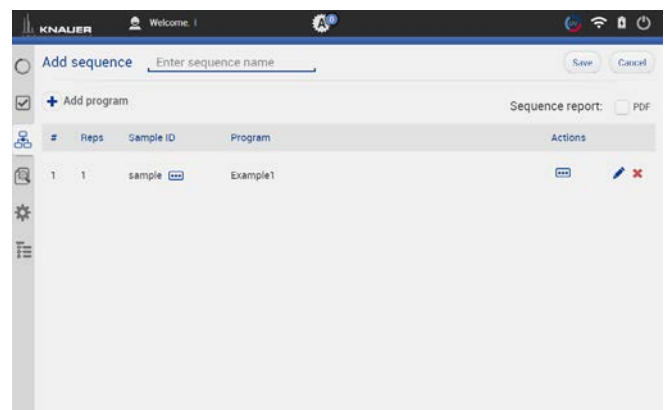


Fig. 6-56 Overview of sequence

22. Select <Save>. You will be directed to the homescreen of menu the PROGRAM & SEQUENCES.



7. Run Queue

The run queue is used to manage and schedule programs and sequences. Once a sequence or program is initiated, it is entered into the run queue automatically.

7.1 General interface

To view the current run queue, select the <Run Queue> button. Each row in the run queue represents a program or sequence that is in process or waiting. From the run queue, you can view details about each run or sequence in the queue, including the following:

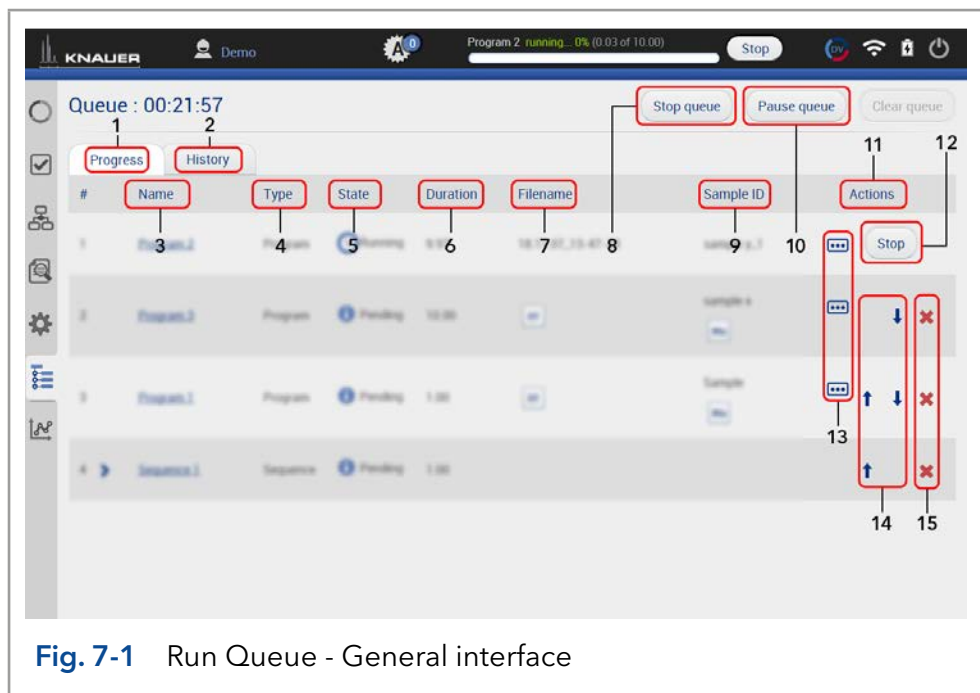


Fig. 7-1 Run Queue - General interface

Legend

- ① Tab <Progress> shows the sequences that still have to be processed.
- ② Tab <History> shows the sequences that have already been processed.
- ③ Name of the program/sequence
- ④ Type of the program/sequence
- ⑤ State - Pending, Running, Completed
- ⑥ Duration of the program/sequence
- ⑦ Filename of program/sequence (refer to chapter 6.11)
- ⑧ <Stop Queue> aborts the actual program/sequence
- ⑨ Sample ID (refer to chapter 6.11)
- ⑩ <Pause Queue> immediately pauses the run. You can decide whether the flow is off or kept on.
- ⑪ Actions - you can stop programs/ sequences
- ⑫ <Stop> will immediately terminate the item currently running in the queue and pause the sequence.
- ⑬ Show comments
- ⑭ Rearrange order of program/sequence
- ⑮ Delete program/sequence from run queue

7.2 Show progress and history

Process

Figure

Tab <Progress>

1. You can view all queued programs/sequences.

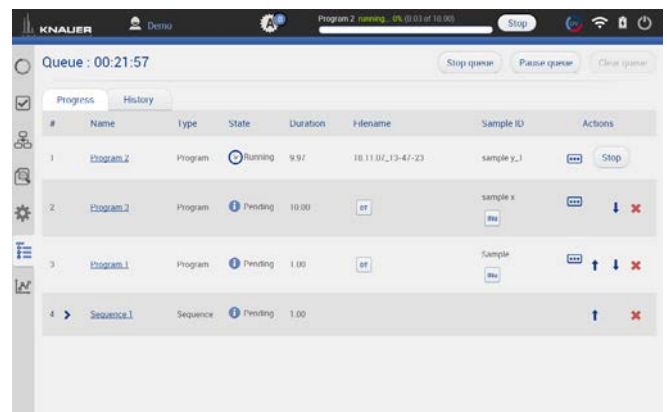


Fig. 7-2 Show progress

2. Select <Pause Queue> to hold the flow with the following options:

- Hold
- Hold with flow off

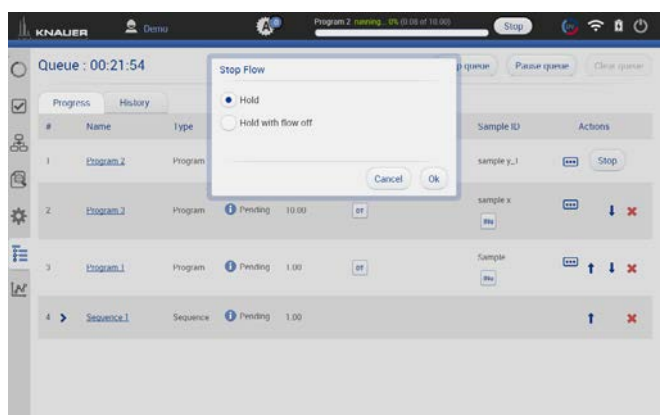


Fig. 7-3 Pause Queue

Tab <History>

1. You can view all previous performed programs/sequences.

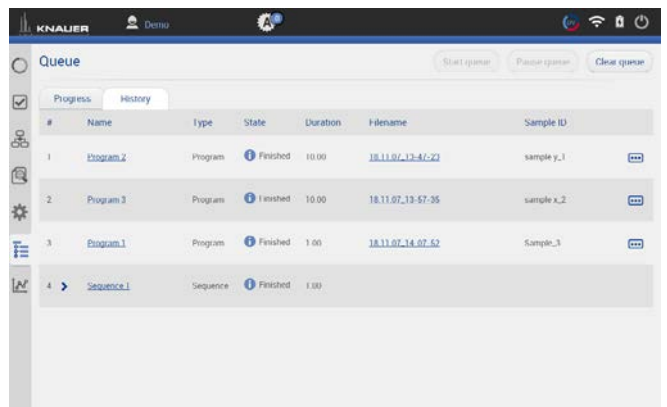



Fig. 7-4 Show history

2. You see a list with important data of the program/sequence.
 - Name of program/sequence which is linked to the corresponding entry in Program & Sequences
 - Type (program/sequence)
 - State
 - Duration
 - Filename which is linked to the result file holding folder
 - Sample ID
 -  Comments
3. To return, select <Progress>.

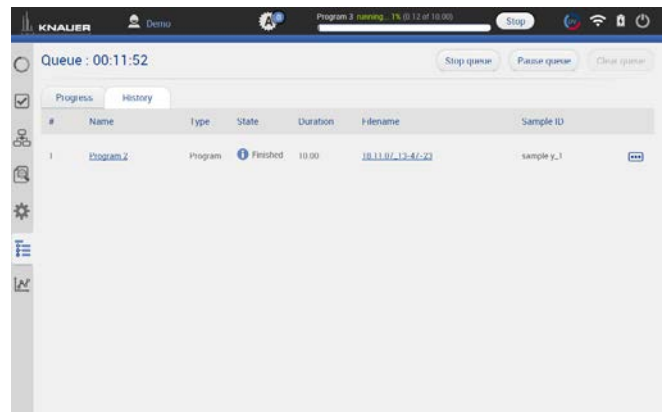


Fig. 7-5 History list



8. Chromatogram window

With the start of data acquisition at the beginning of a program or sequence, a new icon appears on the left side of the screen. The chromatogram window opens automatically after program start and which shows the detector signal, auxiliary and program traces.

8.1 Showing/hiding traces, defining left y-axis

In the list of traces all available data traces, auxiliary traces and program parameters are shown. Switch buttons to <ON> to display the traces in the chromatogram.

Process

1. You can activate the traces during or after a measurement.
2. To show or hide the traces, select <Traces>. A new window is opened.

Figure



Fig. 8-1 Show traces

3. Activate the boxes to display the traces.
4. Confirm with <OK>.



Note: The selection of traces which is shown in the chromatogram is remembered. Next time the program is started the chromatogram is shown in the same view.

The selection of traces is saved in the result file. The Data Viewer shows the chromatogram in the same view as it was recorded in Mobile Control.



Note: Activate the program trace "gradient" to display the composition of the gradient in the chromatogram.



Fig. 8-2

5. Define left y-axis

The scale and unit of the left y-axis can be assigned to different traces. Touch the trace name of interest and the y-axis will adapt to the trace. The selected trace name is highlighted in bold font.



Fig. 8-3 The UV trace is selected. The y-axis shows the absorbance in AU.



Fig. 8-4 The pressure trace is selected. The y-axis shows the pressure in bar.

8.2 Normalize traces

Process

- Traces can be normalized to other traces. Traces which are too far apart to be displayed together can be shown in the chromatogram window.

Figure

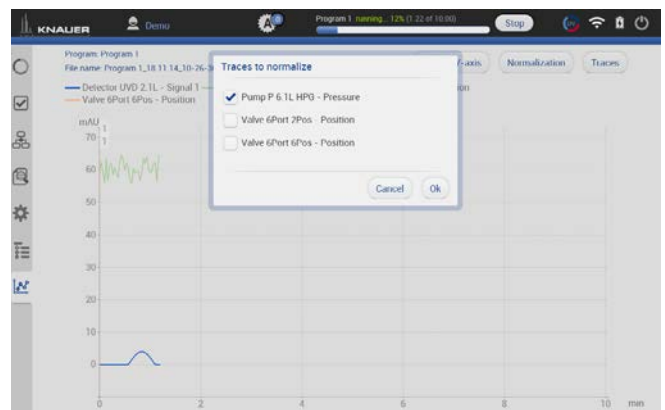


Fig. 8-5 Select the trace to normalize.



Fig. 8-6 Normalized traces shown in the chromatogram.

8.3 Add Second y-axis

Process

For one of the active traces a 2nd y-axis can be added. The 2nd y-axis on the right shows the unit and the scale for the selected trace. The trace is automatically normalized.

1. Chromatogram shows two traces, the UV signal and gradient composition.

Figure



Fig. 8-7 Chromatogram shows UV signal and gradient composition

2. For one of the active traces a 2nd y-axis can be added. Select the gradient/ desired trace after pushing <Second y-axis>.

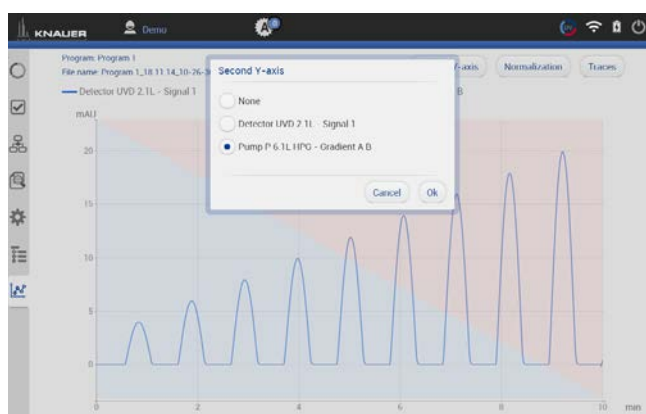


Fig. 8-8 Select second y-axis for pump gradient

- The 2nd y-axis on the right shows the unit and the scale for the selected trace (gradient composition of pump). The trace is normalized automatically.

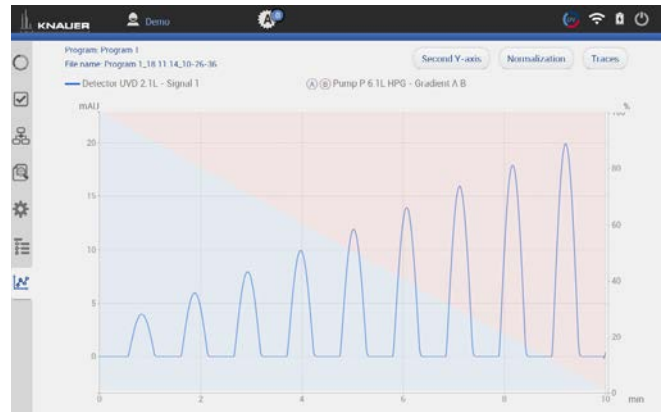


Fig. 8-9 2nd y-axis shows the composition of the gradient on a percentage basis

8.4 Zoom into the screen

8.4.1 Via hand

To move the data trace, touch the surface with one finger and move the finger in the required direction (refer to Fig. 8-9).

- To zoom in, touch the screen with two fingers and slide them apart.
- To zoom out, touch the screen with two fingers and slide them together.
- Double click on the screen with finger to scale the data trace to original size



Note: Zoom along the y-axis of the program trace gradient composition is not supported.



Fig. 8-10 Zoom in and out

8.4.2 Via mouse

The data trace can be moved by moving the mouse with pressed left mouse button.

- Scroll wheel up/down + ALT: Zoom in/out y-axis.
- Scroll wheel up/down + CTRL: Zoom in/out x-axis.

By left double click the data trace will be fully unzoomed.



9. Settings

9.1 General

9.1.1 Network settings

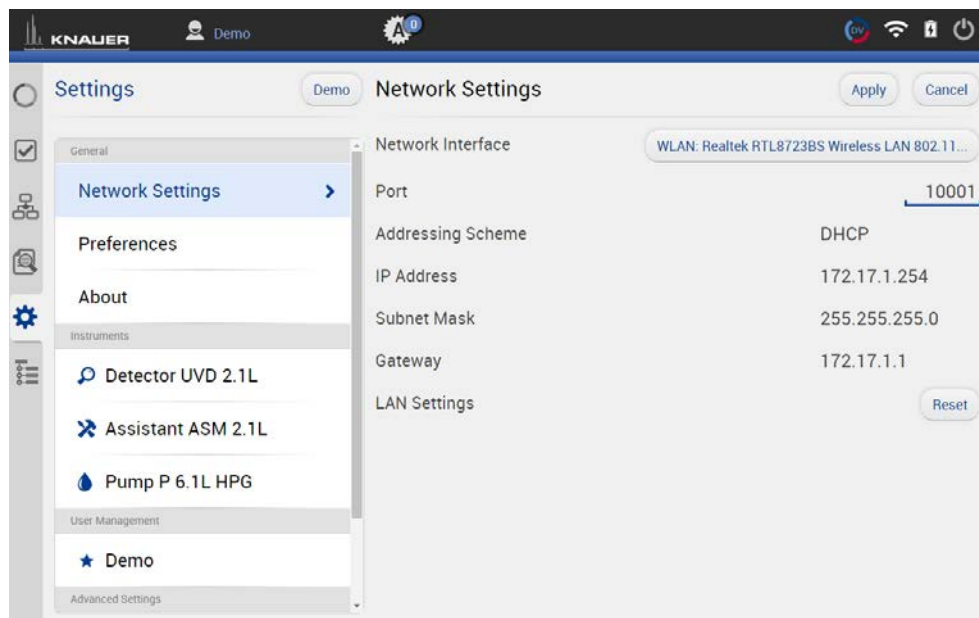


Fig. 9-1 Networks settings

Network Interface	List of the network adapter.
Port	Port = 10001 (factory default) For stable connection use identical port numbers in the device configuration of the chromatography software or Mobile Control and in the device.
Addressing Scheme	Shows the LAN settings of the tablet, laptop or desktop PC. DHCP: automatically setting of IP-address STATIC: manual entry of IP-address
IP Address	Displays the IP address.
Subnet Mask	Displays the subnet mask.
Gateway	Displays the gateway.
LAN Settings	Reset communication settings of KNAUER devices to DHCP. A device you want to reset should be switched on and connected to the same router. Enter the serial number of the device and click the <Reset> button. Restart the device. The device is now set to DHCP. You can also set LAN settings of the device with Firmware Wizard (refer to chapter 13.1).



Note: Communication in LANs is realized via ports. If more than one HPLC system is connected to the same LAN and you plan on controlling them separately, you can use different ports to avoid interference. To do so, the port number of every device has to be changed to the same port number in the device configuration of the chromatography software or Mobile Control.

We recommend to use the same port number for all devices in the same system.

9.1.2 Reset of LAN settings to DHCP

In Mobile Control you can set the device on DHCP.

If you can not find the device on the network because you do not know the static IP address, change the network setting to DHCP.

This function can be carried out by:

1. Mobile Control
2. Firmware Wizard

In the following, the first approach is explained.

For the using the Firmware Wizard, refer to chapter 13.1.

A static IP address can be set in the setting section of each interface (refer to chapter 9.2.1) or by the Firmware Wizard (refer to chapter 13.1).

Process

1. Go to Settings > Network Settings.

Figure

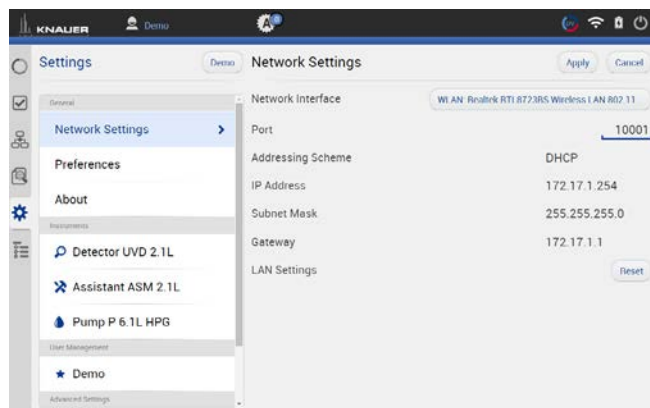


Fig. 9-2 Open Network Settings

2. Press <Reset>. A window is opened.



Fig. 9-3 Reset LAN Settings

3. Enter the serial number of the device.
4. Confirm with <OK>. The device is now set to DHCP.
Here, you can only change the LAN settings to DHCP. With the Firmware Wizard you can change from Static (fixed IP address) to DHCP and vice versa (refer to chapter 9.1.2).
5. We recommend a restart of the devices, to accept the new LAN settings.

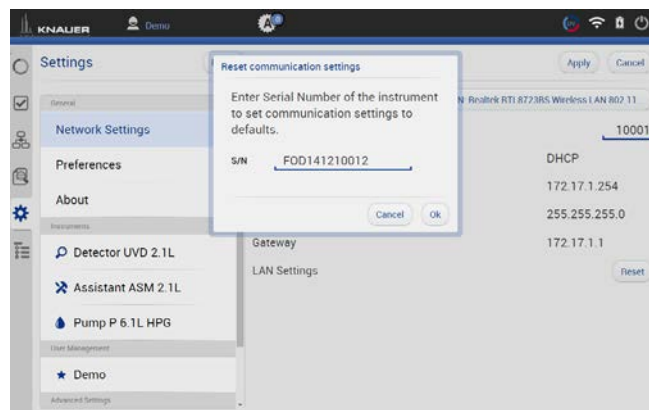


Fig. 9-4 Reset LAN Settings



Note: For AZURA P2.1S/P4.1S devices, resetting the network settings to DHCP can only be performed with the Firmware wizard.

9.1.3 Preferences

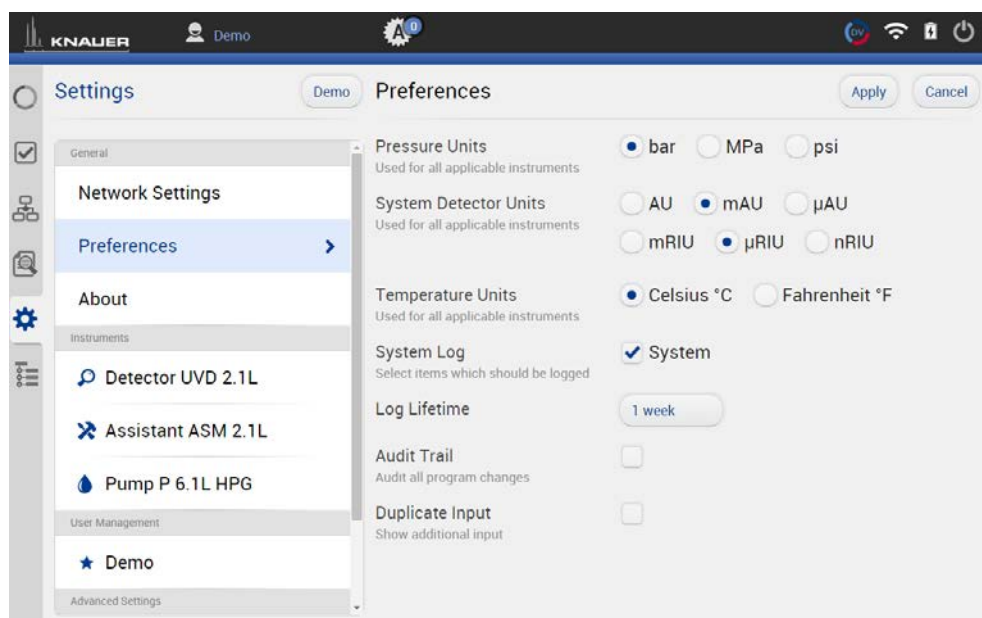


Fig. 9-5 Preferences overview



Note: Always confirm your selection with <Apply>.

Pressure Units

Selection between bar, MPa and psi.

System Detector Units

Selection between AU, mAU, μAU (UV detectors), mRIU, μRIU, nRIU (RI detectors).

Temperature Units

Selection between Celsius °C and Fahrenheit °F.

System Log	Mobile Control records the system protocol/system logs. The entries are listed under Logs & Errors. Activation of communication logs are explained in chapter 11.1.
Log Lifetime	Log lifetime: duration the log data are stored. Choose between 1 week, 2 weeks, and 1 month.
Audit Trial	Records all program changes. You can view the protocol under Program & Sequences (refer to chapter 6.12).
Duplicate input	Duplicate input facilitates filling entry fields with the virtual keyboard. Since the virtual keyboard covers a large part of the screen, a popup window appears in the upper section repeating the input request.



9.1.4 About

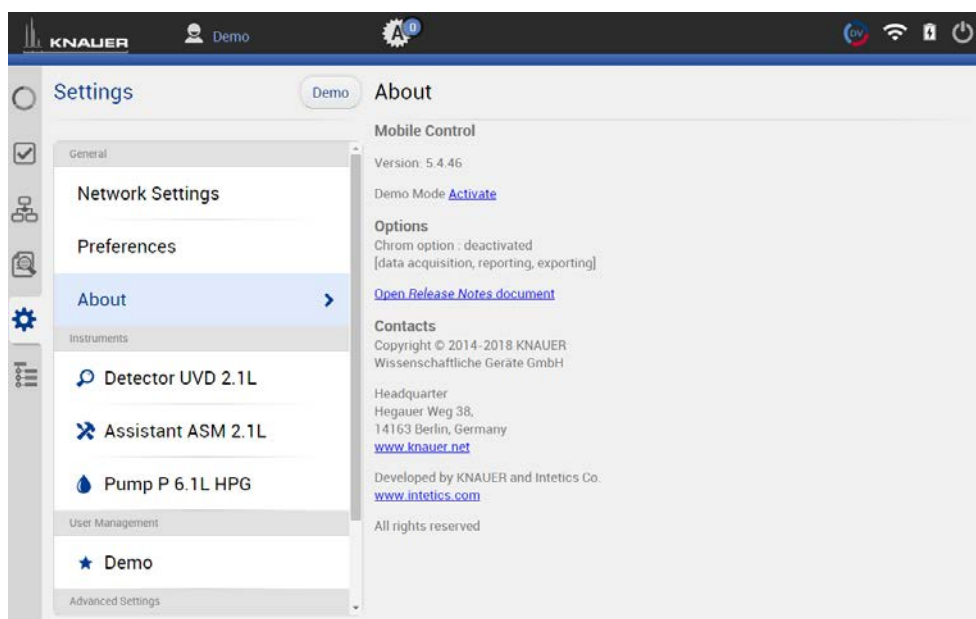


Fig. 9-6 About

This chapter provides information about the Mobile Control version and whether the Chrome option / data collection is enabled.

If you are in Trial mode or on a Demo Tour you will find a link to activate Mobile Control. For an activated license the activation code is displayed.

Open the release notes to learn more about:

- Supported instruments
- Computer requirements
- Operating the Mobile Control
- Notes on the use of Mobile Control

Also consider the known issues on Mobile Control in this document.

9.2 Instruments

All devices configured in the system are listed. The right part shows the device settings. Here, device specific parameters can be changed.

9.2.1 General interface

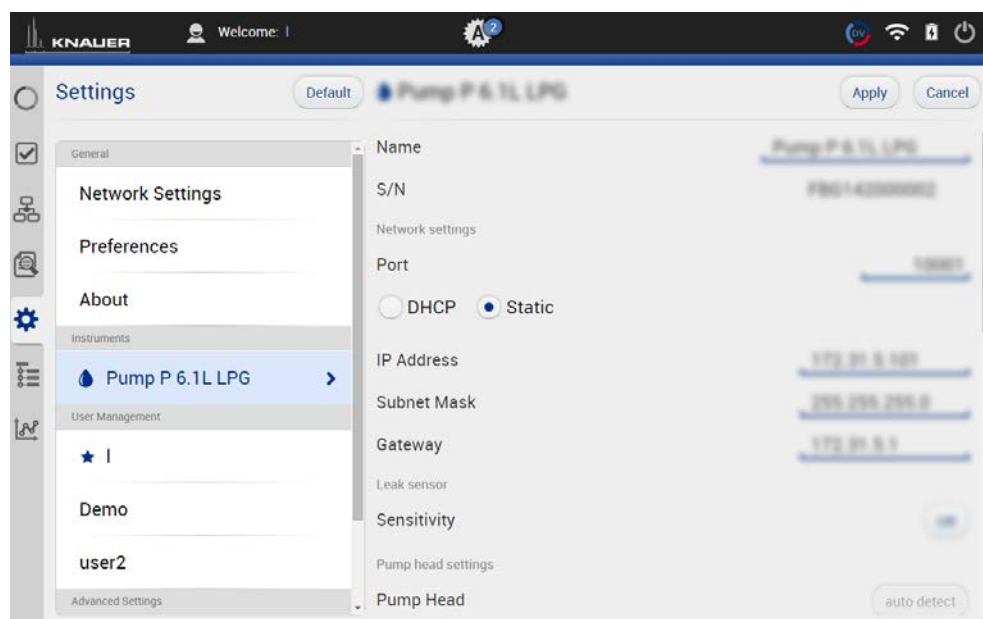


Fig. 9-7 Device settings - general interface

Name By default, the device designation is used as device name. Tap the name to change it. Change the name if more than one device of the same type is configured in the system.

Serial number S/N The serial number of the device is read out automatically.

Port Communication in LANs is realized via ports which are part of the network address. If more than one HPLC system is connected to the same LAN and you plan on controlling them separately, you can use different ports to avoid interference.

To do so, the port number of every device has to be changed to the same port number in the device configuration of the chromatography software or Mobile Control. We recommend to use the same port number for all devices in the same system.



Note: The factory settings for the port of AZURA devices is 10001. Use identical port numbers in the device configuration of the chromatography software or Mobile Control and in the device, otherwise the connection cannot be established.

DHCP/Static

In DHCP mode the router allocates IP Address and Subnet Mask automatically.

Static enables you to enter IP Address and Subnet Mask manually.

Activate checkbox „Static“ and enter the required network parameters (see Fig. 9-8).

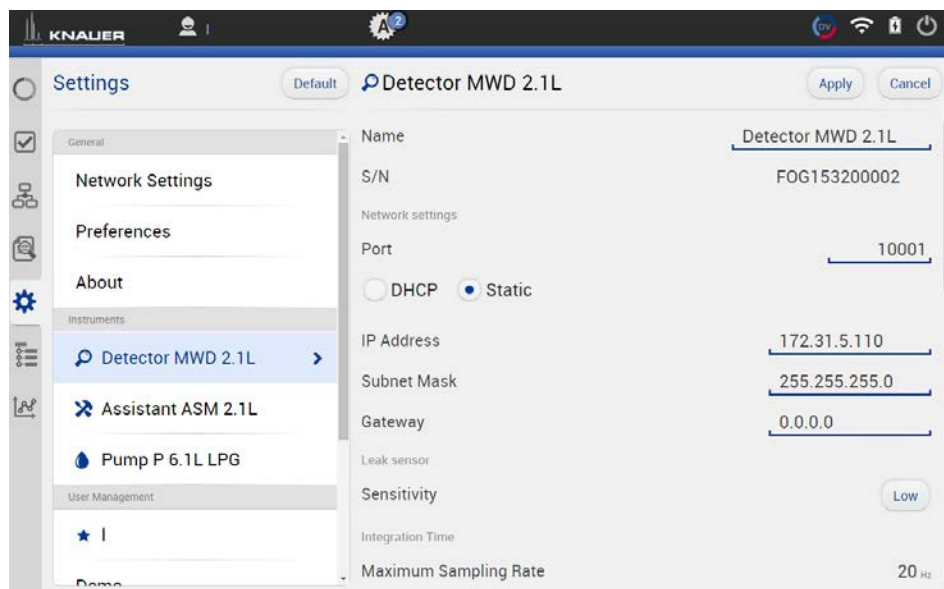


Fig. 9-8 Static IP-address

IP Address

Displays the IP address of the device.

Subnet Mask

An IP address consists of two parts. One part of the IP address designates the network address of the device. The other part designates the distinct address of an device inside of a network. The subnet mask defines which part of the IP address is the network address of an device. It determines which other devices the respective device can communicate with, namely all devices with the same network address.

This network is called subnet. This means that all devices of a system and the computer have to operate in the same subnet, using the same network address. Devices in other networks can only be communicated with via a router.

Gateway

If communication has to be established with devices in other networks, a gateway is used. The gateway routes all network requests, which are not directed towards its own network (subnet) to another network (subnet). This task is usually performed by routers which communicate with subnets via IP protocols.

Leak Sensor

The leak sensor can be switched on and off. Three different settings are available, LOW (low sensitivity), MEDIUM (medium sensitivity), and HIGH (high sensitivity). Press the button <ON>, to activate the leak sensor.

Sensitivity	Choose between Low, Medium, or High .
Restore Factory Settings	This function enables your to re-set the device to its default settings.

9.2.2 Assistant

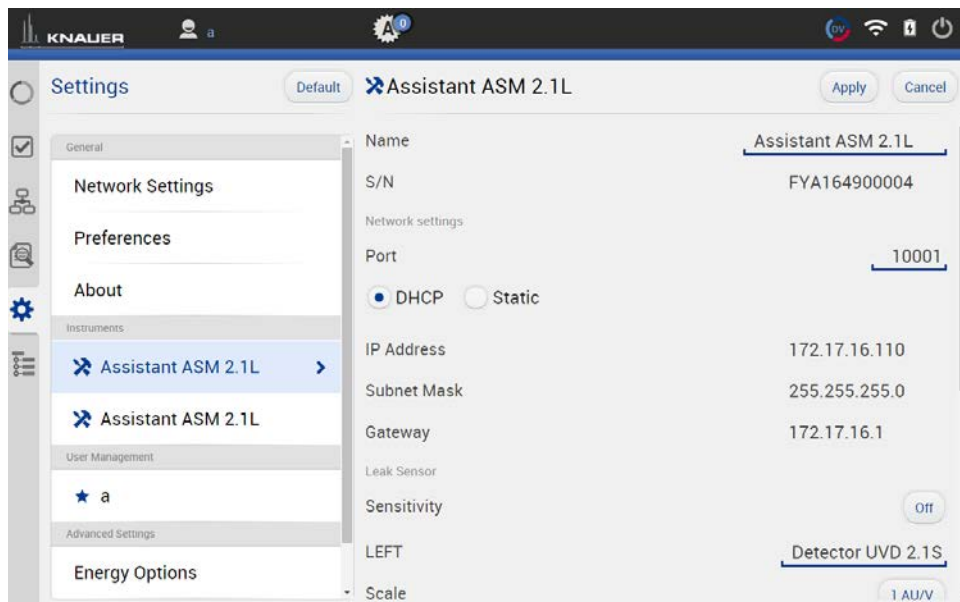


Fig. 9-9 Device settings - Assistant

Depending on the devices built in, the configuration is divided in LEFT, MIDDLE, and RIGHT. Devices are displayed according to device configuration.

Pump Head	Select the size of the pump head. Choose between 10 ml and 50 ml.
IMin Sensitivity (pump)	The motor current is a measure for the current load of the pump and therefore the system pressure for pumps which do not have a pressure sensor. The pump switches off when the current falls below the entered value. Setting for the minimum motor current permitted before the pump switches off (in %).
IMax Sensitivity (pump)	The pump switches off when the current exceeds the entered value. Setting for the maximum motor current permitted before the pump switches off (in %).
LEFT/MIDDLE/RIGHT	Divided configuration, depending on the devices built in.
Configuration (valve)	A list field with different valve types is displayed. Choose the setting according to your valve: 6, 12, 16.

Scale (detector)	Choose between 0 AU/V, 0.5 AU/V, 1 AU/V, 1.5 AU/V, 2 AU/V, 2.5 AU/V, 3 AU/V, 3.5 AU/V, 4 AU/V, 4.5 AU/V and 5 V.
Time Constant (detector)	Smooths measuring values. Measuring points of a set time interval are combined and the mean value is displayed as a measuring point. A broader interval increases the smoothing proportionally. Choose between 0.00 s, 0.01 s, 0.02 s, 0.05 s (DAD), 0.1 s, 0.2 s, 0.5 s, 1.0 s, 2.0 s, 5.0 s, and 10 s.

9.2.3 Autosampler

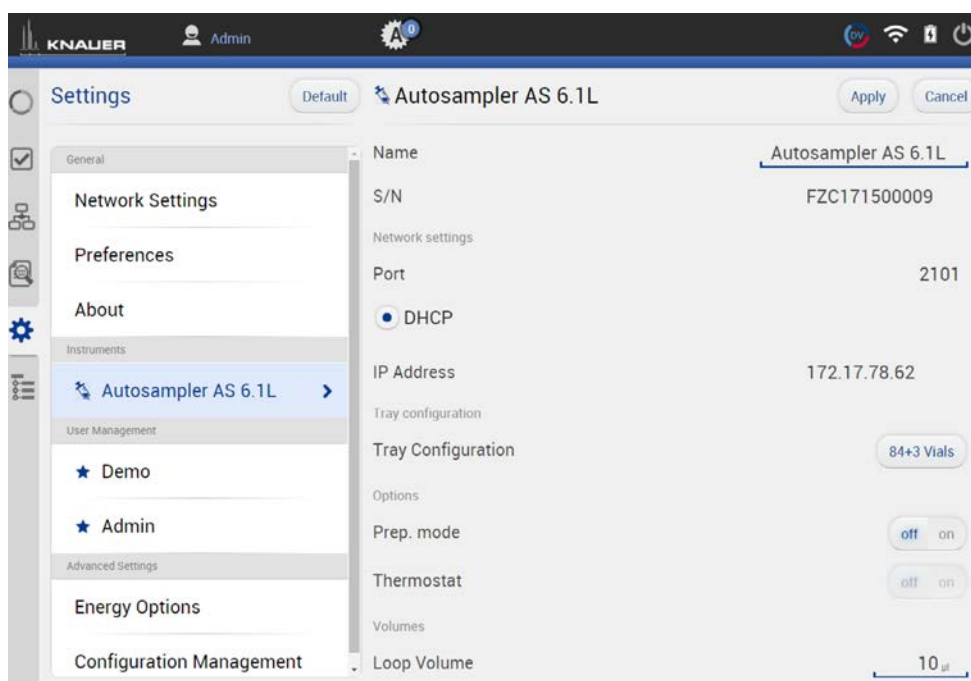


Fig. 9-10 Device Settings - Autosampler

Availability of options depends on the device type. Unavailable functionalities are grayed out.

Tray Configuration	Opens menu to select used autosampler tray configuration. Choose according to your installed trays.
---------------------------	--

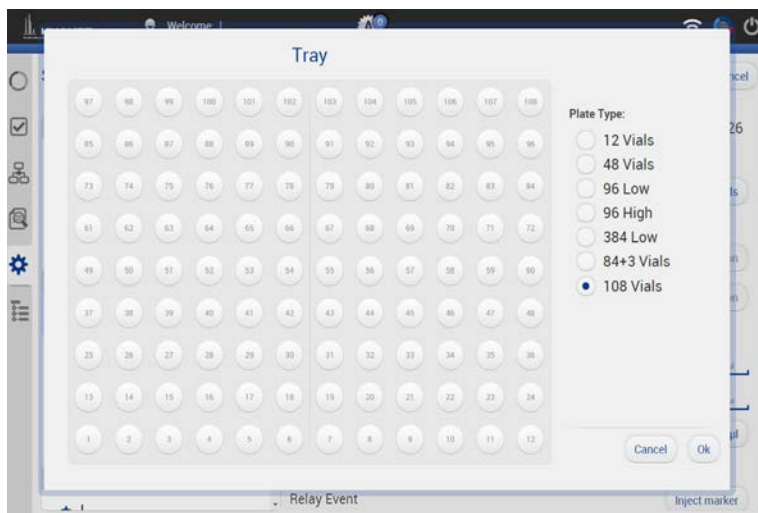


Fig. 9-11 Tray configuration

Prep. Mode	Turn on, if autosampler uses Prep Mode
Thermostat	Turn on, if autosampler uses thermostat
Loop Volume	Enter volume of installed sample loop volume
Tubing Volume	Enter volume of installed tubing volume
Syringe Volume	Enter volume of installed syringe volume
Relay Event	Choose relay event if needed
Tray Position	<p>Push the button to select position of the tray. A new window is opened (see fig. 9-12)</p> <p>Select position of tray.</p> <p>Home: backside of tray cabinet,</p> <p>Front: frontside of tray cabinet to change vials</p>



Fig. 9-12 Set Tray Position

Syringe Position	Choose, if syringe needs to be changed.
Needle Exchange	Press start to exchange sample needle.

9.2.4 Column Thermostat 2.1

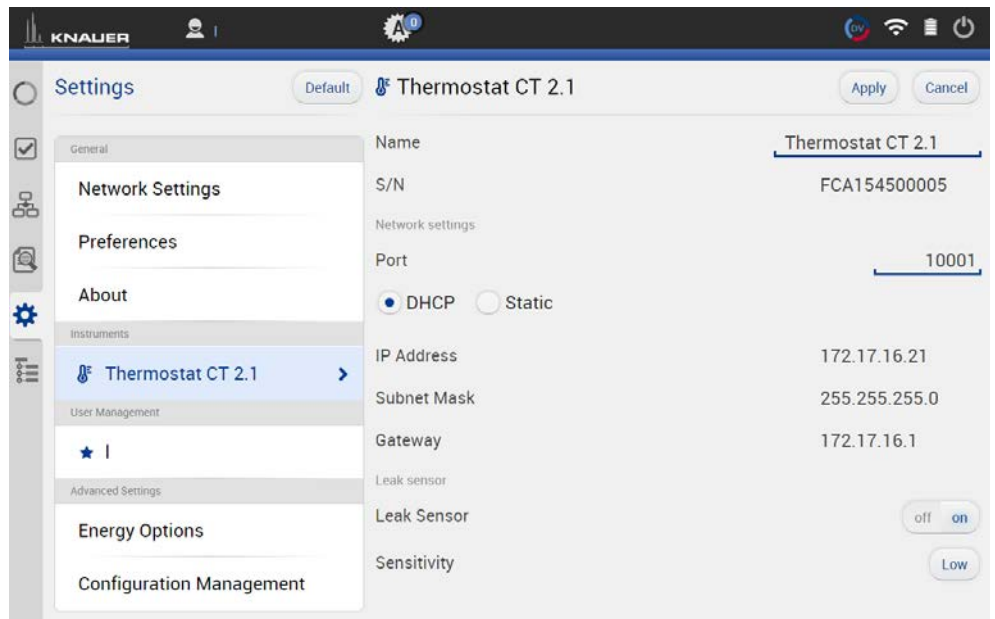


Fig. 9-13 Device Settings - Column Thermostat

9.2.5 Detector

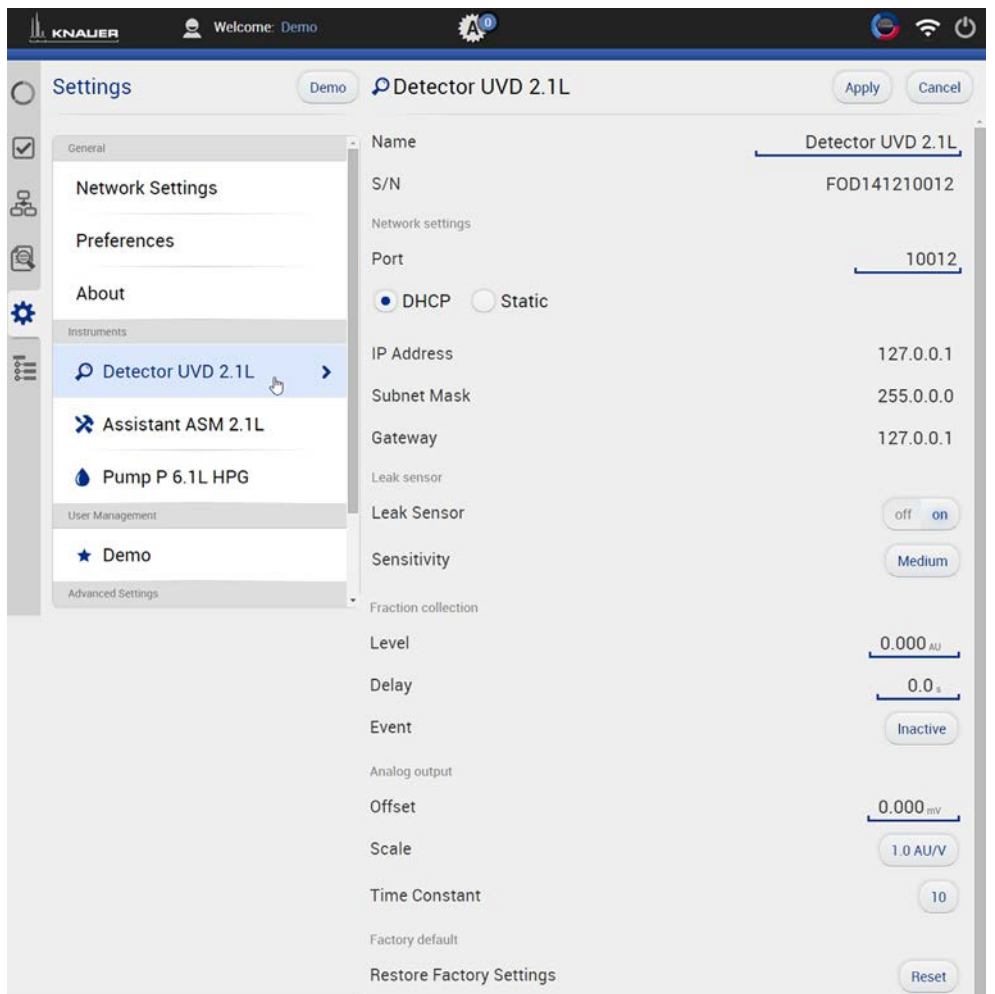


Fig. 9-14 Device Settings - Detector

Level
(only available in
AZURA® UVD 2.1L)

Threshold which can be set. If this value is exceeded, an event starts.

Delay	Time delay between exceeding of the level threshold and event output.
Event	Choose between inactive, Event 1 (relay contact) and Event 2 (TTL compatible output). (refer to the detector instructions).
Offset	Type in the correction offset which will be used for the signal recalculation.
Scale	Choose between 0 AU/V, 0.5 AU/V, 1 AU/V, 1.5 AU/V, 2 AU/V, 2.5 AU/V, 3 AU/V, 3.5 AU/V, 4 AU/V, 4.5 AU/V and 5 V.
Time Constant	Smooths measuring values. Measuring points of a set time interval are combined and the mean value is displayed as a measuring point. A broader interval increases the smoothing proportionally. Choose between 0.00 s, 0.01 s, 0.02 s, 0.05 s (DAD), 0.1 s, 0.2 s, 0.5 s, 1.0 s, 2.0 s, 5.0 s, and 10 s.
Restore Factory Settings	This function enables your to re-set the device to its default settings.
Integration Time (only available in AZURA® DAD 2.1L, DAD 6.1L and MWD 2.1L)	Activate the button <optimal> and the optimal integration time will be calculated by the program. The maximum sampling rate for the integration time is also calculated and displayed.

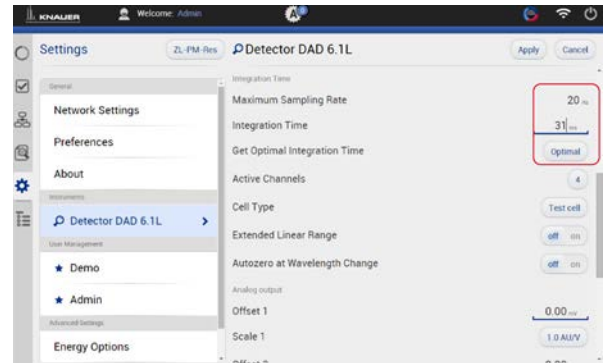


Fig. 9-15 Example for settings DAD 6.1L

9.2.6 Interface Box IFU 2.1 LAN

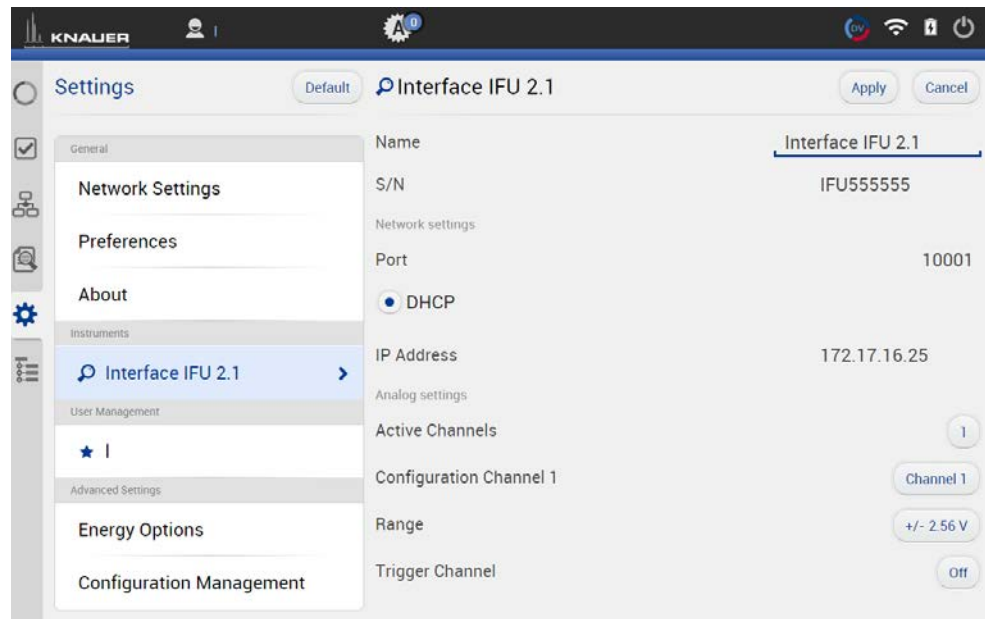


Fig. 9-16 Device Settings - Interface Box IFU 2.1 LAN



Note: The analog output of Interface Box IFU 2.1 LAN is not supported in version 5.0.0.

Active Channels

Choose the number of active channels (1-4).

Configuration Channel

Individual configuration of each channel. Select a channel and a new window is opened (see fig. 9-17).

- 1st line: Channel name. You can name the channel individually, e.g. with the name of the connected device.
- 2nd line: Displayed Unit of the recorded signal. Default setting is mV.
- 3rd line: Y-Axis multiplier. Here you can change the conversion factor of the recorded voltage signal. The default value is 0.001 corresponding to mV-unit setting

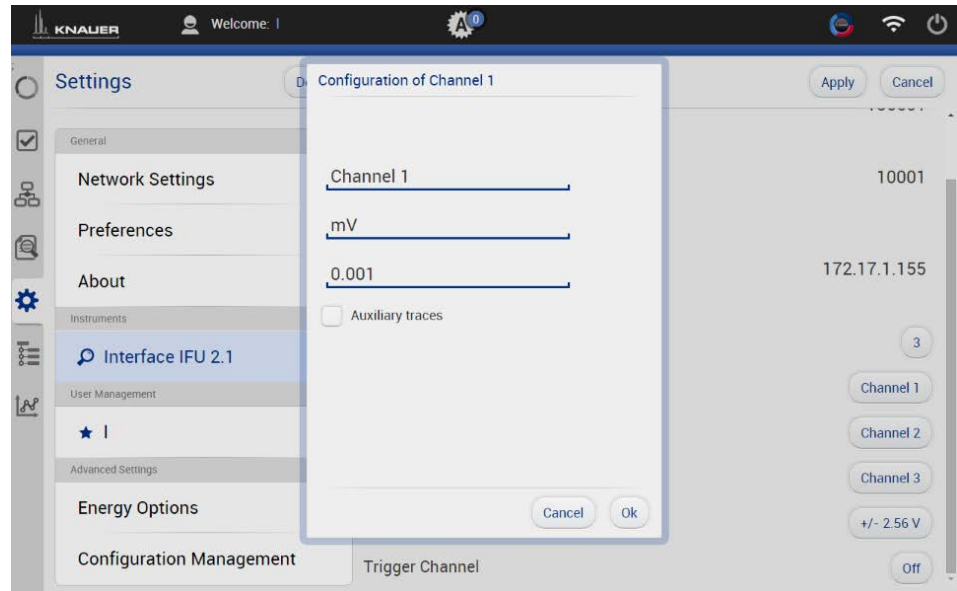


Fig. 9-17 Channel configuration

Range

The voltage range can be adjusted to the expected signal to get a higher resolution (see fig. 9-18).

One of the following ranges can be selected:
 ± 2.56 V, ± 1.28 V, ± 0.64 V, ± 0.32 V, and
 ± 0.16 V

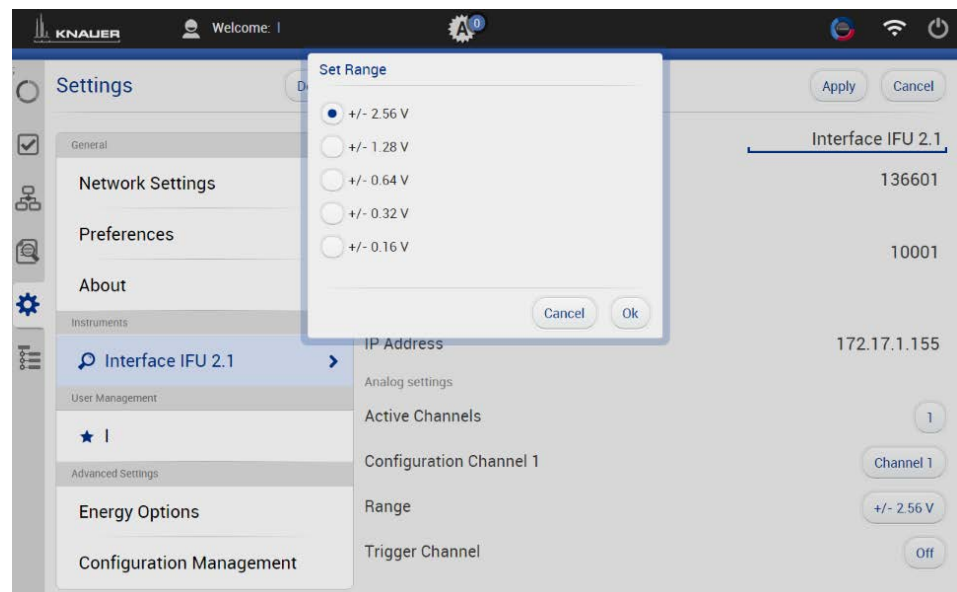


Fig. 9-18 Voltage Range

Trigger Channel

If a program should be started via an external device, one of the four channels can be selected to receive the trigger signal. "Waiting for trigger" has to be activated for this function.

9.2.7 Pump

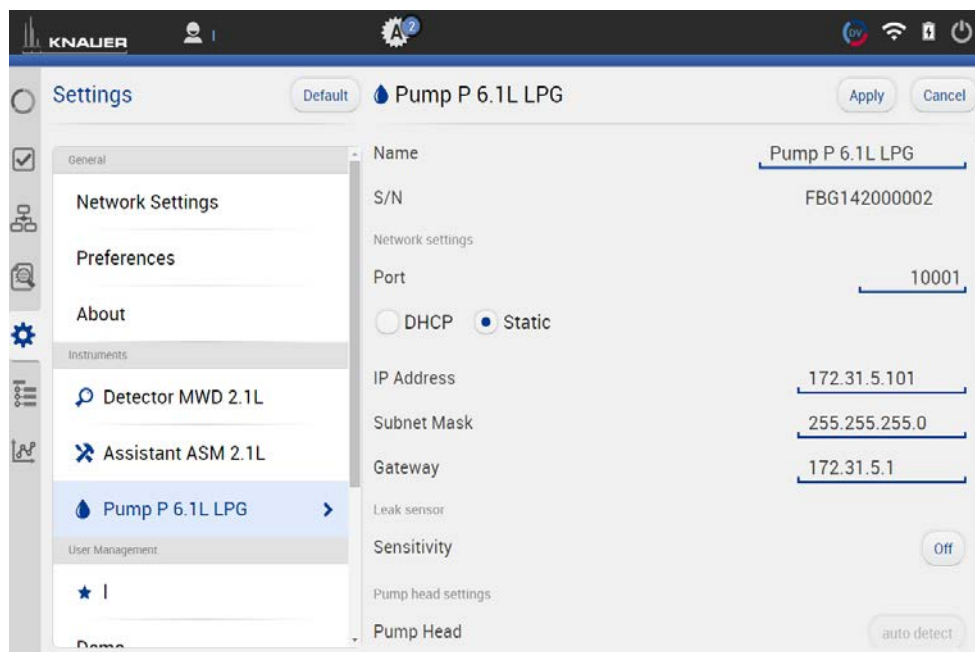


Fig. 9-19 Device Settings - Example AZURA® Pump P 6.1L

Availability of options depends on the device type. Unavailable functionalities are grayed out.

Pump head	Displays the volume of the pump head.
Mixing Chamber	Choose between 50µl, 100 µl, 200 µl, 250 µl or enter a value. Change only the volume if a different mixing chamber is installed.
Gradient Type	Some pumps are pre-configured as isocratic, HPG or LPG pump. In this case, the configuration cannot be changed. For pumps that are not pre-configured, you can select (see below). For AZURA P4.1S pumps, HPG mode is not supported.
Constant Pressure (only available for AZURA® P 6.1L)	Constant Pressure mode allows you to define a desired back pressure and a gradient composition. The flow rate will be adapted until selected pressure is reached. Use „Minimum and „Maximum Control Flow’ in DETAIL OVERVIEW to set the minimum and maximum flow rates.



Note: Refer to „APPENDIX A” for detailed instruction how to configure pumps in isobar or constant pressure mode.

Isobar mode (only available for AZURA® P 2.1L)	Isobar mode allows you to define a desired back pressure. The flow rate will adapted until selected pressure is reached.
	Use ‚Minimum‘ and ‚Maximum Control Flow‘ in Detail Overview to set the minimum and maximum flow rates.
Start Input	Choose Disabled, if you want to deactivate the analogue input. Choose between Start pump and Stop pump, if the pump should start or stop running upon receiving the trigger signal. Select Enabled, if the trigger signal shall be used to start a program. For more information about analog control, refer to the pump instructions.
Offset	Offsets the analog output signal in V.
Full Scale	Choose between 1V 2V and 5V to define the range of the analog output signal.
Signal Source	Choose between Pressure, HPG/LPG - A, HPG/LPG - B, Disabled, and Flow.
Time Constant	Smoothes measuring values. Choose between 0.1 s, 0.2 s, 0.5 s, 1.0 s, 2.0 s, 5.0 s, and 10 s.
Actual Interpreted Pressure	Manual autozero of the pump pressure.

9.2.8 Binary HPG configuration of AZURA® P 2.1L pumps

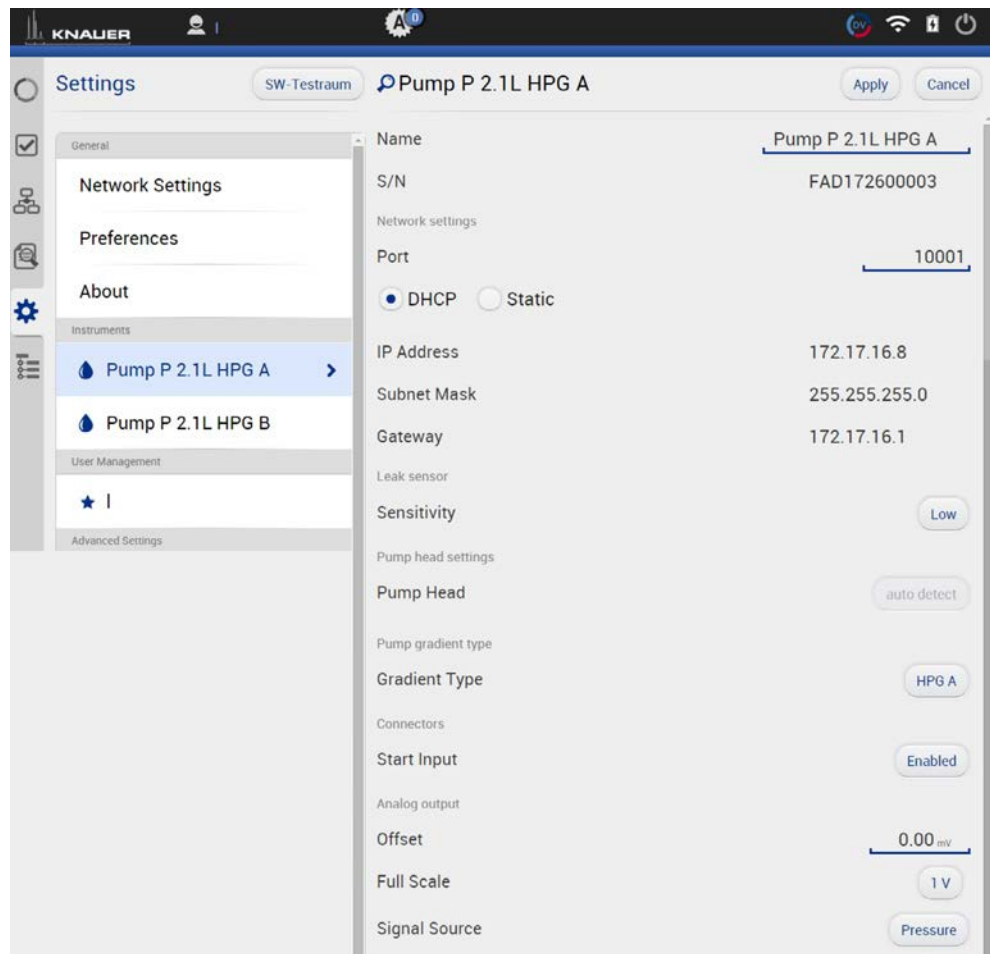


Fig. 9-20 Device Settings - Synchronized Pumps

Gradient Type

(only available for AZURA® P 2.1L)



Equal pump heads are recommended for HPG mode. When using different pump heads (e.g. 500 and 1000 ml), maximum pressure values have to be considered. First, the pump with the lower maximum pressure must be selected, then the second pump can be added to activate HPG mode.

Choose between:

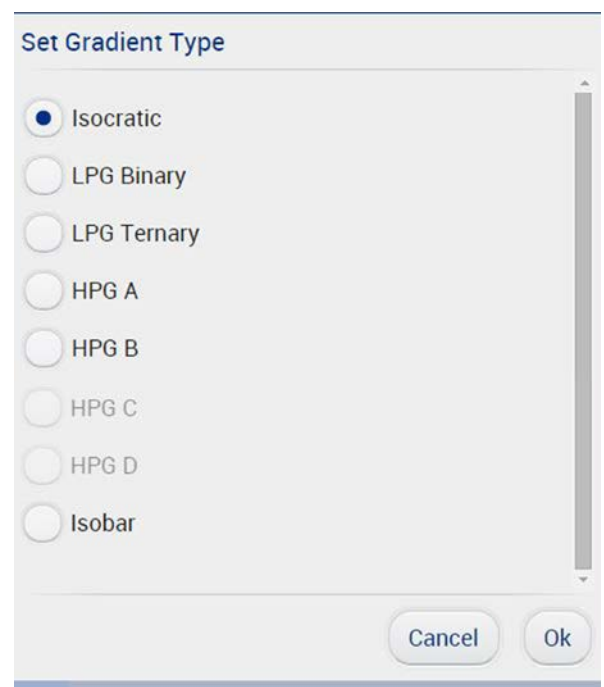


Fig. 9-21 Set gradient type

Start Input	Choose Disabled, if you want to deactivate the analogue input. Choose between Start pump and Stop pump, if the pump should start or stop running upon receiving the trigger signal. Select Enabled, if the trigger signal shall be used to start a program. for the analogue input of the pump.
Offset	Offsets the analog output signal in V.
Full Scale	Choose between 1 V, 2 V, and 5 V.
Signal Source	Choose between Pressure, HPG/LPG - A, HPG/LPG - B, Disabled, and Flow.
Time Constant	Smooths measuring values. Choose between 0.1 s, 0.2 s, 0.5 s, 1.0 s, 2.0 s, 5.0 s, and 10 s.



9.2.9 Valve

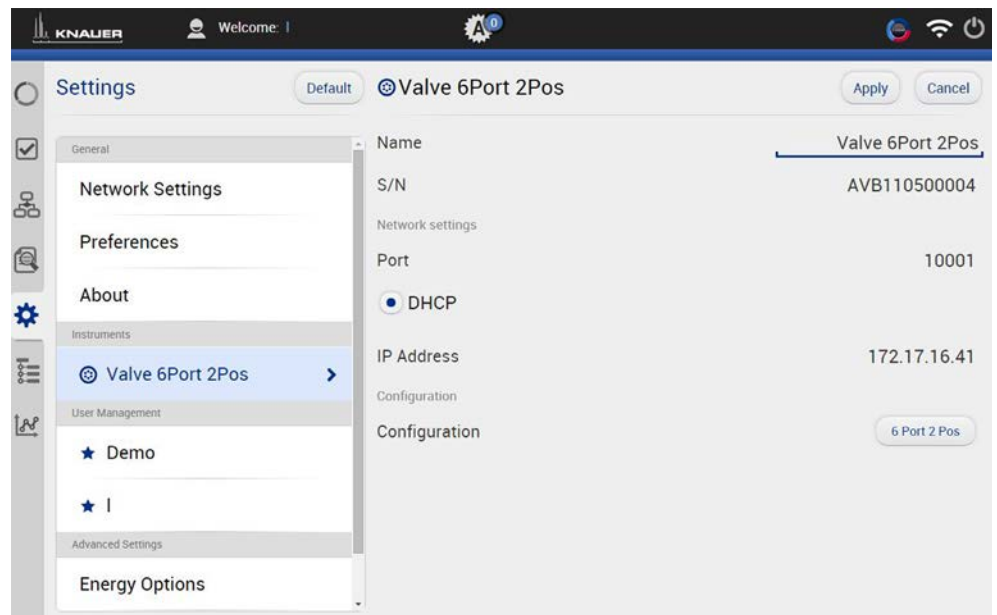


Fig. 9-22 Device Settings - Valve

Configuration	A list field with different valves is displayed. Choose between multiposition valves and 2-position valves according to your valve.
----------------------	---



9.3 User management

The user account of the user that is logged-in is displayed under USER MANAGEMENT. The administrator can create new user accounts or assign rights to any user by activating the check boxes

Legend

- ① **Default**
Choose a configuration.
- ② **Create new user account**
- ③ **Apply**
Confirm your entry
- ④ **Cancel**
Cancel your entry
- ⑤ **Change password**
- ⑥ **Choose picture**
Upload a picture
- ⑦ **Delete picture**

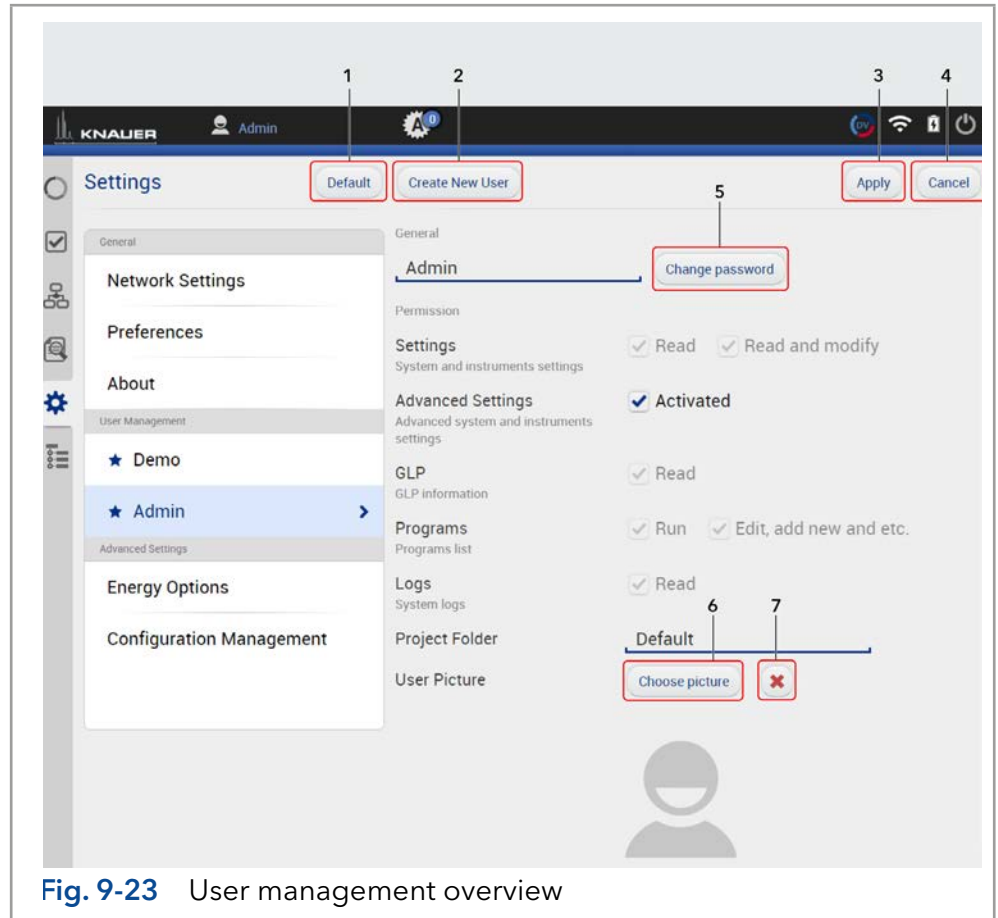


Fig. 9-23 User management overview

Settings	Choose between „Read“ and „Read and modify“.
Advanced Settings and instrument settings	Activate the checkbox to give the user authorization for advanced settings and instrument settings.
GLP	Activate the checkbox to give user authorization for read the GLP data.
Programs	Choose between <ul style="list-style-type: none"> ■ Run ■ Edit, add new and more
Logs	Activate the checkbox to give the user authorization to read the log files.
Project Folder	Name the folder. All user specific data are saved.
User Picture	Upload a picture of the user. A folder is opened.



Note: The user specific files will be saved in folder C:\Mobile Control\Projects\Project folder*

9.3.1 Create a new user

This option is only available for administrators.

Process

1. Go to Settings > User management.
2. Select <Create new user>.

Figure

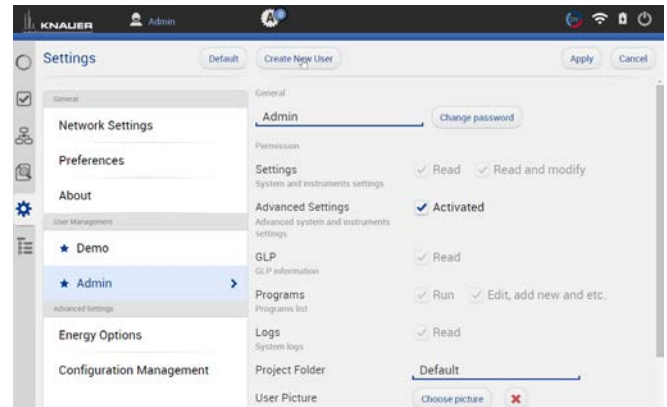


Fig. 9-24 Create new user

3. Activate the checkboxes depending on the authorization you want to give.
4. Always confirm your settings with <Apply>.

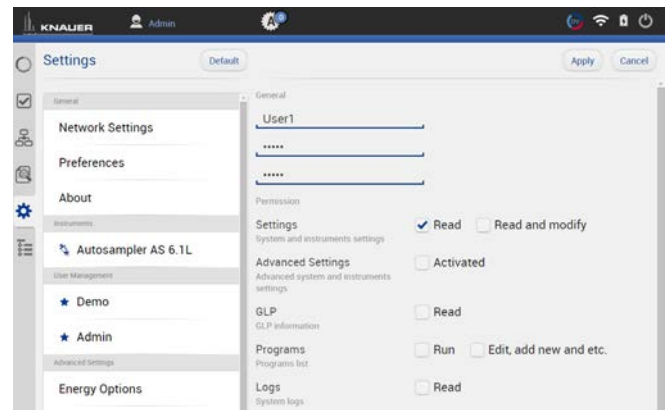


Fig. 9-25 Settings - user account

5. After successful creation of the new user account a status message is displayed.

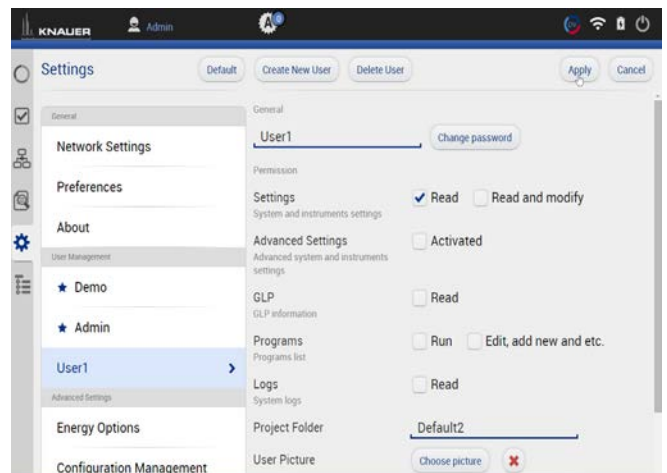


Fig. 9-26 Settings - user account

- On the left side, the menu with restricted authorization is shown. The menu bar on the left side is limited.

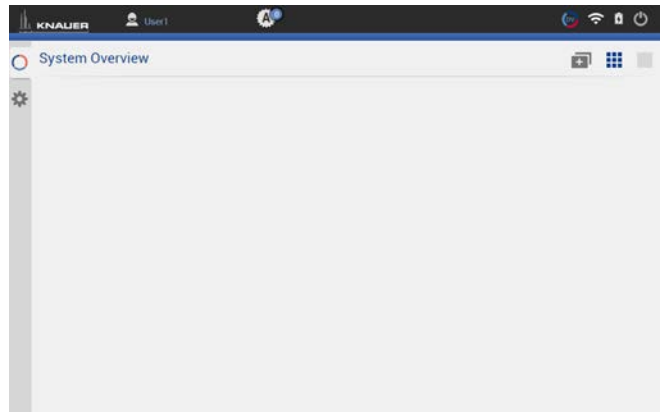


Fig. 9-27 Restricted authorization

- Options which cannot be changed are displayed in grey out.

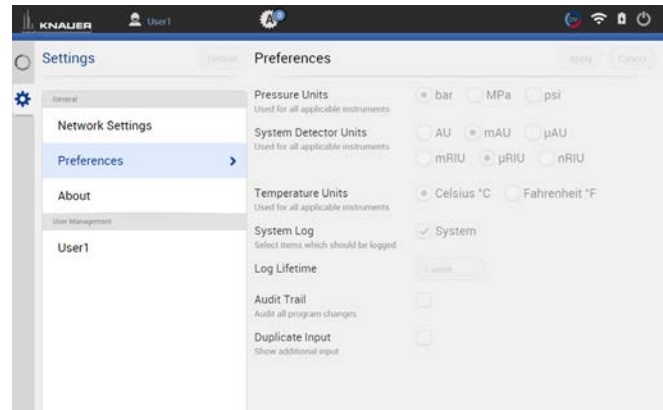


Fig. 9-28 Restricted authorization



9.3.2 Change user account

The user must have the respective permissions to do so (Settings > READ AND MODIFY).

Process

- Log off.
- Confirm with <OK>.

Figure



Fig. 9-29 Log off

3. Select <Change User>.

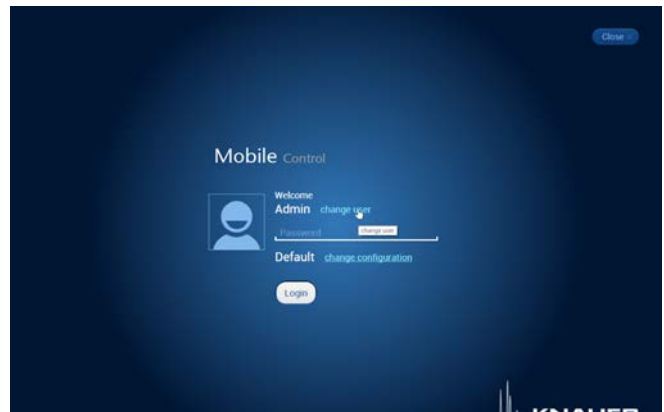


Fig. 9-30 Log in screen

4. Enter the user name and the password.
5. Press <Login>.

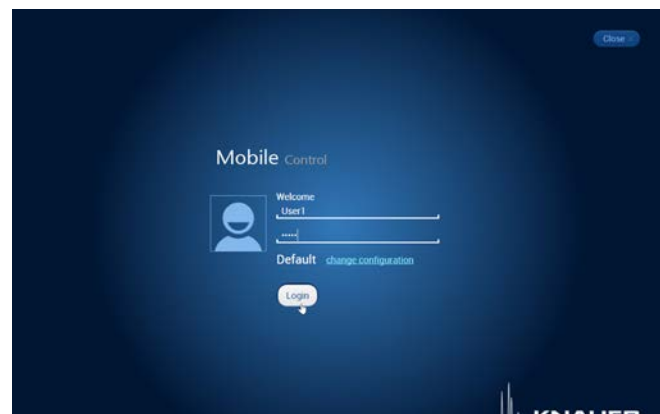


Fig. 9-31 Log in screen



9.3.3 Changing own password

Each user can change their own password, if provided with the respective permissions. The administrator can change the password of every user, without knowing their current password.

Process

1. Log in with your user account.
2. Go to SETTINGS > USER MANAGEMENT.
3. Select <Change password>.
A new window is opened.

Figure

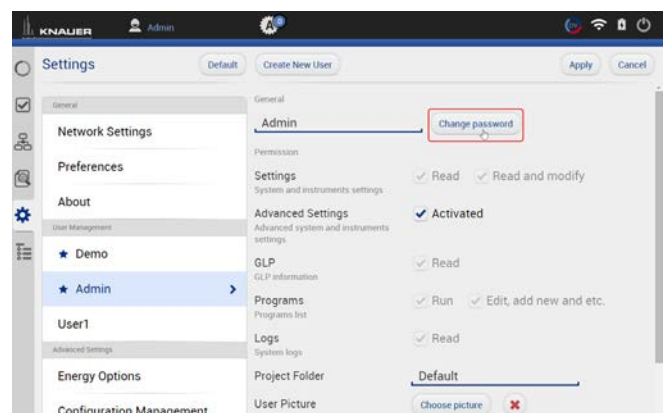


Fig. 9-32 Change own password

4. Enter the current password, and two times the new password.
5. Confirm with <OK> and <Apply>.

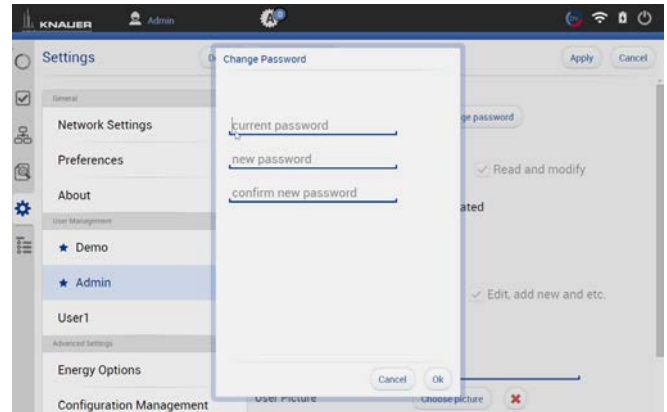


Fig. 9-33 Change own password



Note: If you want to change the password of another user, you must log in as administrator and select the user (USER MANAGEMENT) to change the password.



9.4 Advanced Settings

9.4.1 Configuration management


The Configuration Management allows to control and manage different HPLC systems with one tablet. The systems are connected to different routers (networks). Each configuration is linked to the SSID (Service Set Identifier) of the router and contains information of the integrated AZURA devices in the system.


Network settings **and** system configuration are saved in each created configuration.

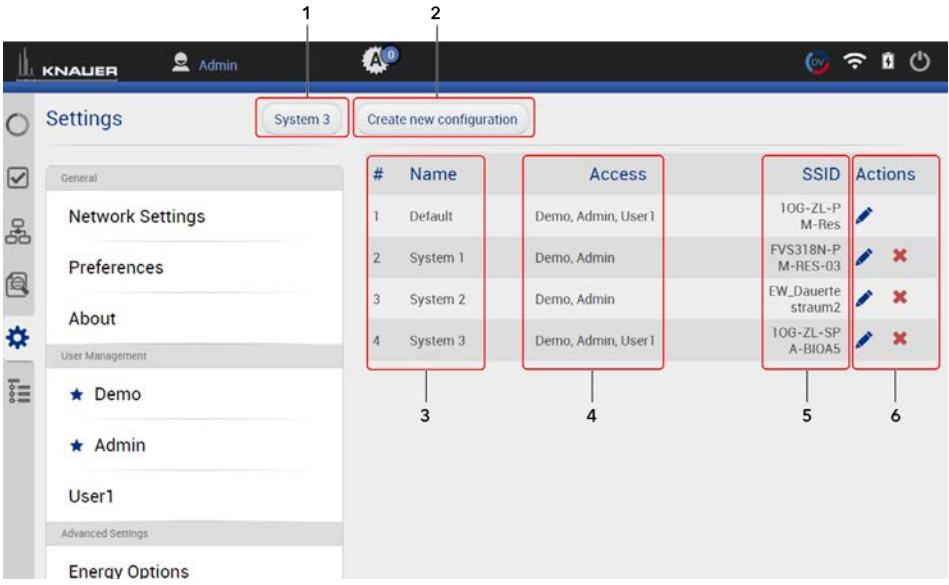
Legend

- ① Shows the actual configuration.
- ② Click on the button to create a new configuration.
- ③ Lists the name of the configuration.
- ④ Lists the users which have access to this configuration.
- ⑤ Lists the name of the service set identifier (network).

- ⑥ Possible edit actions:

 Click on the red cross to delete a configuration.

 Click on the pen symbol to edit the settings.



#	Name	Access	SSID	Actions
1	Default	Demo, Admin, User1	10G-ZL-P M-Res	
2	System 1	Demo, Admin	FVS318N-P M-RES-03	
3	System 2	Demo, Admin	EW_Dauerte straum2	
4	System 3	Demo, Admin, User1	10G-ZL-SP A-BIOA5	

Fig. 9-34 Configuration List



Fig. 9-35 Connection of different systems to Mobile Control

There are 2 possibilities to create a configuration:

- a) in menu configuration management (refer to chapter 9.4.1.1)
- b) via Log in (refer to chapter 9.4.1.2)

Both ways are explained in the following chapters.



Note: Before adding a new configuration the required router must be connected to the PC/notebook/tablet.

9.4.1.1 Configuration via menu Settings

Process

Figure

1. Open the info center in your tablet software.
2. Select network.

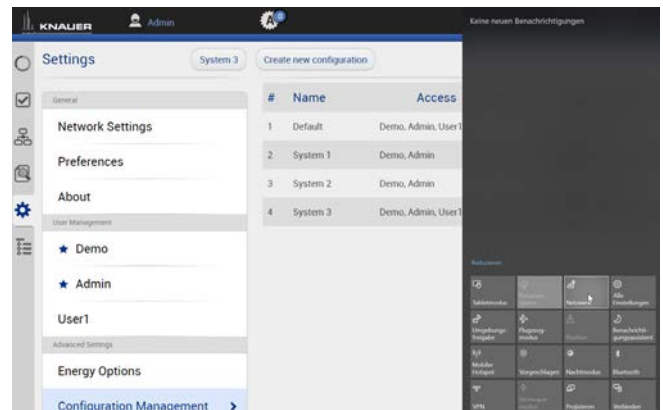


Fig. 9-36 Open WLAN connection

3. Select the network, you want to connect to.

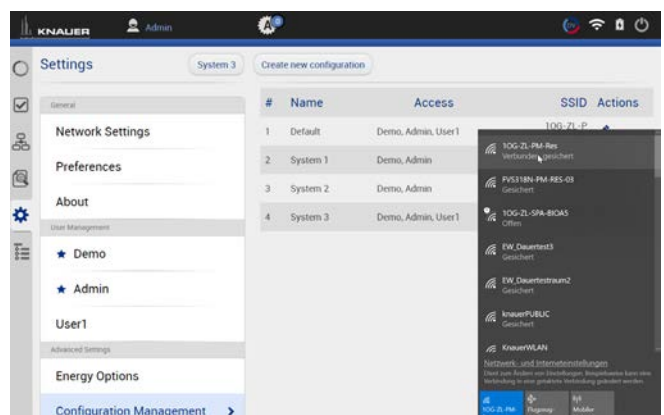


Fig. 9-37 Choose network

4. Press <Connect>.

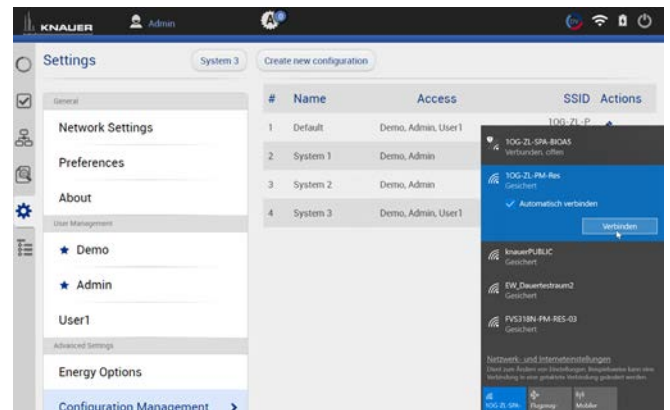


Fig. 9-38 Connect to network

5. A message informs that the network has been changed.

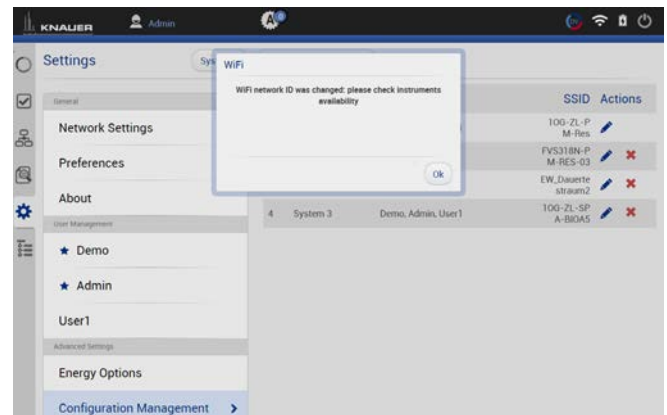


Fig. 9-39 Status message

6. Select <Create new configuration>.

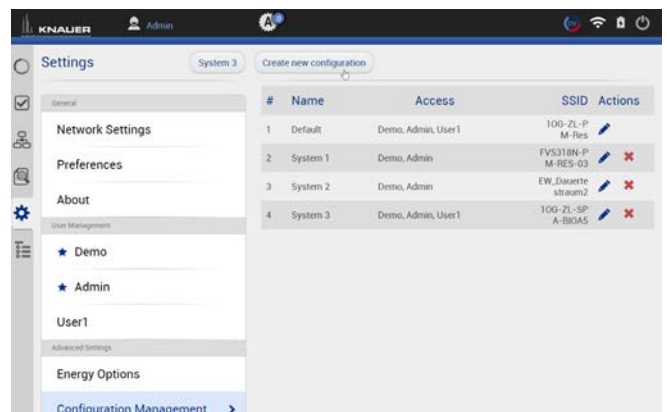


Fig. 9-40 Create configuration

7. Name the configuration.
8. Confirm with <Apply>.

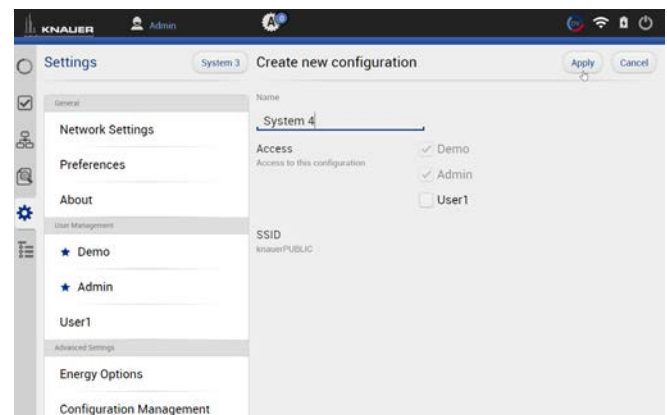


Fig. 9-41 Edit new configuration

9. You see the new configuration in the list with name, access and SSID. You can edit or delete the configuration.

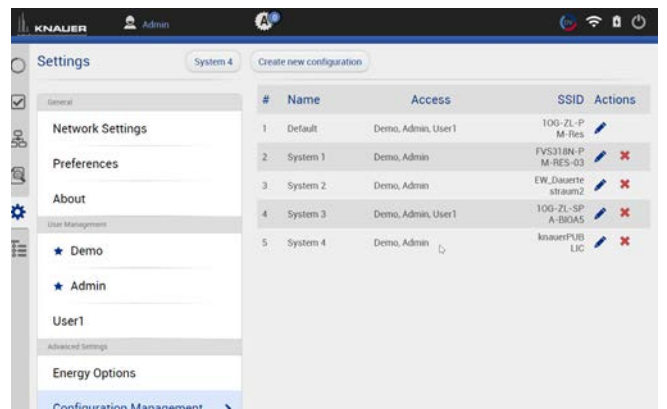


Fig. 9-42 Configuration List

- Go to SYSTEM CONFIGURATION and configure your new system.

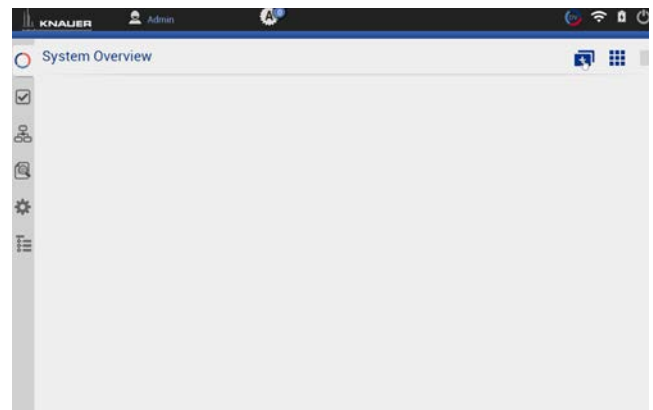


Fig. 9-43 System Configuration

After selecting a configuration, the application connects automatically to the corresponding router and enables the communication with AZURA® devices.



9.4.1.2 Configuration via Log in

Process

Figure

- Open network connection which is showing all available networks.

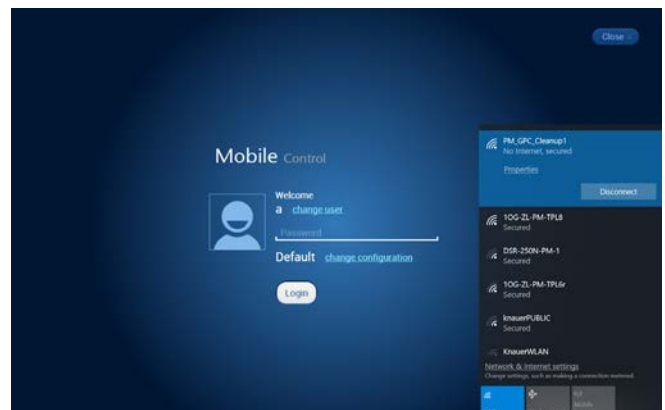


Fig. 9-44 Open network connections

- Select and connect to the desired network.

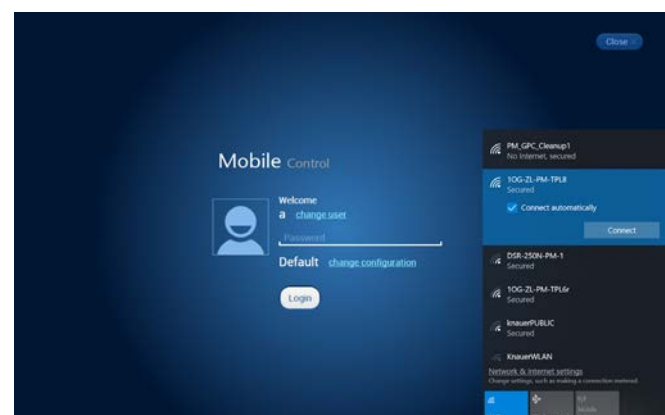


Fig. 9-45 Choose network (system)

- The tablet/laptop/PC is now connected to another network.

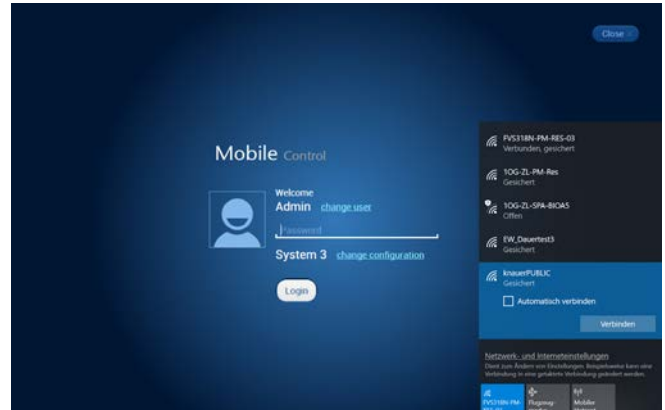


Fig. 9-46 Connect with network (system)

- Select <Change configuration> and enter the name of the new configuration.

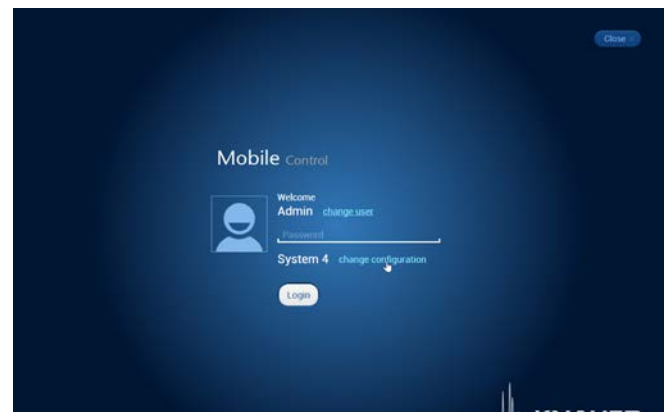


Fig. 9-47 Change configuration

- Log in Mobile Control



Fig. 9-48 Add new configuration

- A message informs that the network has been changed.

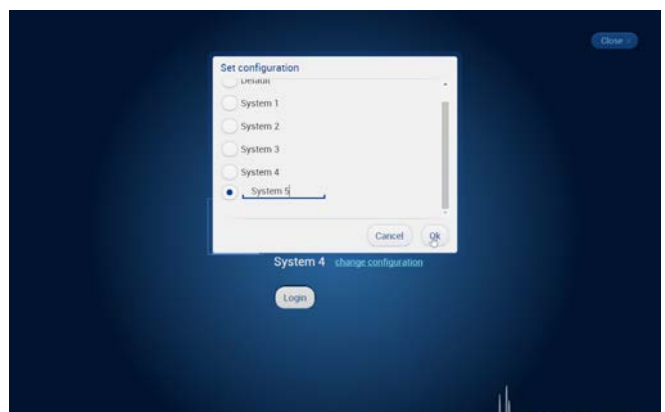


Fig. 9-49 Log in

7. Go to **SETTINGS > CONFIGURATION MANAGEMENT**. The new configuration is listed with name, access and SSID. You can edit or delete the configuration.

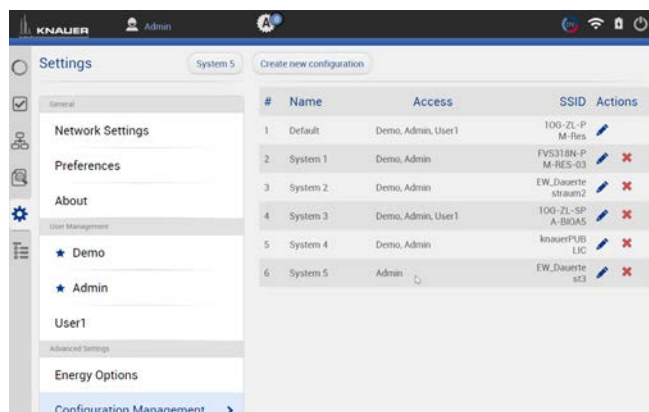


Fig. 9-50 Configuration list



9.4.2 Energy Options

In the energy options, single devices or a system can be put into standby mode and woken up from standby mode.

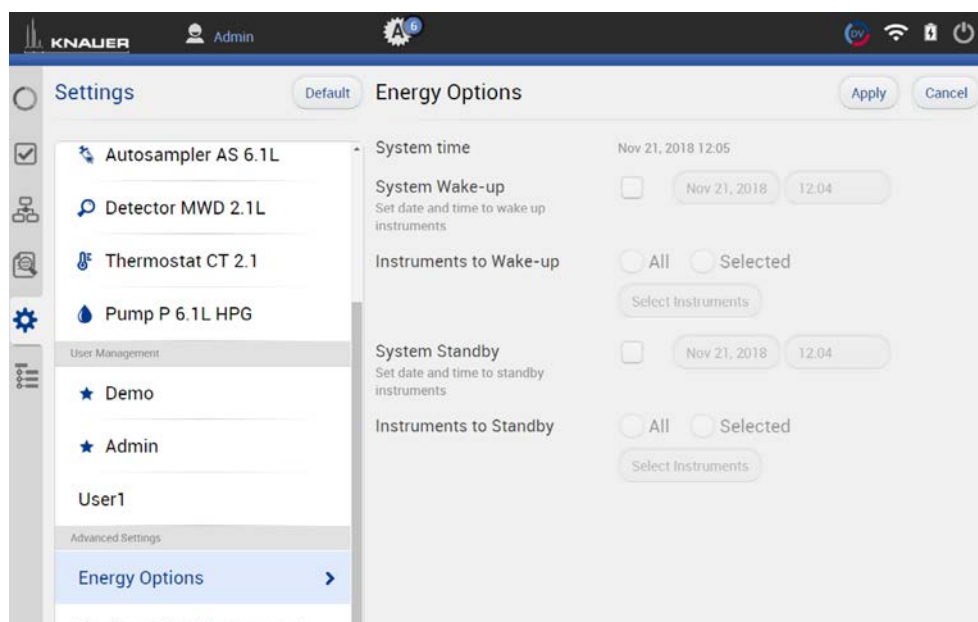


Fig. 9-51 Energy Options

9.4.2.1 Putting devices into standby mode manually

To put the device into standby mode manually, go to **DETAIL VIEW** and tap the button **STANDBY**.

9.4.2.2 Putting devices into standby mode automatically

To put the system or single devices into standby mode automatically, go to **System Setup > Energy Options > System standby**.

1. Tap the date and time buttons to enter the respective data.
2. To activate the standby mode, tick the check box.
3. Activate one of the options under Instrument to Standby. ALL puts all devices which are part of the configuration into standby mode. Individual devices can be selected with **SELECT INSTRUMENT**. NOT ONE deactivates the standby mode for all devices.

9.4.2.3 Waking up devices from standby mode manually

To wake up the device from standby mode, tap **DETAIL VIEW >POWER UP**. Note the waiting period which the lamp of the detector needs to be ready for use. Find the necessary data in the user manual of the device.

9.4.2.4 Waking up devices from standby mode automatically

To put the system or single devices into standby mode automatically, tap **SYSTEM SETUP · ENERGY OPTIONS · System wake-up**.

1. Tap the date and time buttons to enter the respective data.
2. Under **SYSTEM WAKE-UP**, tick the check box.

Activate one of the options under Instrument to wake-up. Activating **ALL** wakes up all devices which are part of the configuration into standby mode. Individual devices can be selected with **SELECT INSTRUMENT**. **NOT ONE** deactivates the wake-up functionality for all devices.



10. Checks & Tests

10.1 GLP

In menu GLP, you find a list of all devices for which GLP data can be displayed. Choose the respective device to view GLP data.

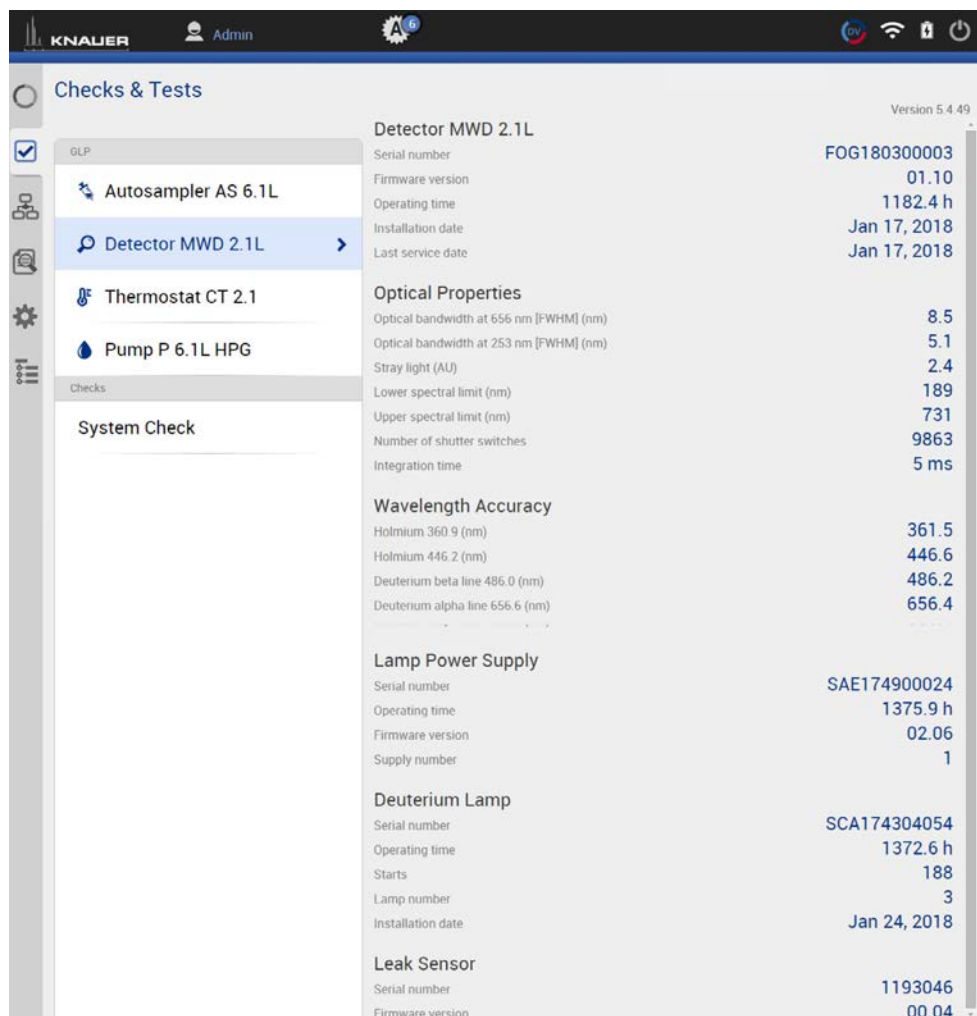


Fig.10 -1 Checks & Tests - Overview

AZURA® Autosammler AS 6.1L	
Serial number
Firmware version
Injector valve cycles
Syringe valve cycles
Syringe cycles

AZURA® Column Thermostat CT 2.1

- Serial number
-
- Firmware version
-
- Operating time
-
- Installation date
-
- Last service date
-

AZURA® Assistant ASM 2.1L

The view of the assistant depends on the installed devices.

- Serial number
-
- Firmware version
-
- Operating time
-
- Installation date
-
- Last service date
-

Left, Middle, Right device

Serial number

Pump

Firmware version

Operation time

Head type

Valves

Configuration

Switching cycles

Detector

Firmware version

Operation time

Starts

Leak sensor

Serial number

Firmware version

AZURA® Assistant ASM 2.2L

The view of the assistant depends on the installed devices.

- Serial number
-
- Firmware version
-
- Operating time
-
- Installation date
-
- Last service date
-

Leak sensor

Serial number

Firmware version



Note: The view of the assistant depends on the installed devices. The GLP data of the assistant modules resemble the entries of the standalone devices.

Detector AZURA® MWD 2.1L

Serial number

Firmware version

Operating time

Installation date

Last service date

Optical Properties

Optical bandwidth (FWHM) [nm]

Stray light (AU)

Lower spectral limit
[nm]Upper spectral limit
[nm]

Number of shutter switches

Integration time

Wavelength Accuracy

Holmium 360.9 nm

Holmium 446.2 nm

Deuterium beta line 486.0 nm

Deuterium alpha line 656.6 nm

Lamp Power Supply

Serial number

Operating time

Firmware version

Supply number

Deuterium Lamp

Serial number

Operating time

Starts

Lamp number

Installation date

Leak Sensor

Serial number

Firmware version

Detector AZURA® UVD2.1S/UVD 2.1L

Serial number

 Firmware version

 Operating time

 Instrument's power cycles

 Installation date

 Last service date

Optical Properties

Optical bandwidth at 656 nm (FWHM)

 Light intensity I-Sig at UV-maximum

 Light intensity I-Ref at UV-maximum

 Number of filter wheel switches (only UVS 2.1L)

 Integration time

Lamp Power Supply

Serial number

 Operating time

 Firmware version

 Supply number

Deuterium Lamp

Serial number

 Operating time

 Starts

 Lamp number

Detector AZURA® DAD 2.1L/DAD 6.1L

Serial number

 Firmware version

 Operating time

 Installation date

 Last service date

Optical Properties

Optical bandwidth at 656 nm (FWHM)

 Optical bandwidth at 253 nm (FWHM)

 Stray light (AU)

 Lower spectral limit [nm]

 Upper spectral limit [nm]

 Number of shutter switches

 Integration time

Wavelength Accuracy

Holmium 360.9 nm

 Holmium 446.2 nm

 Deuterium beta line 486.0 nm

 Deuterium alpha line 656.6 nm

Lamp Power Supply

Serial number

Operating time
Firmware version
Supply number
Deuterium Lamp
Serial number
Operating time
Starts
Lamp number
Leak Sensor
Serial number
Firmware version

Detector AZURA® RID 2.1L	
Serial number	
Firmware version	
Operating time	
Installation date	
Last service date	
	Light Source
	Operating time
	Installation date
	Light source number
	Validation Data
	Last measured span
	Last measured span date
	Cell batch number
	Deuterium alpha line 656.6 nm
	Leak Sensor
	Serial number
	Firmware version

Interface Box IFU 2.1 LAN	
Serial number	
Firmware version	
AZURA® Pump P 6.1L	
Serial number	
Firmware version	
Operating time	
Installation date	
Last service date	
Motor operating time	
	Leak Sensor
	Serial number
	Firmware version

Head left/right	
Serial number	
Operation time	
Cycles	Piston cycles
Volume	Total volume conveyed to date
P-index	Unit for the current strain of the pump
Head type	Pump head type
Leak Sensor	
Serial number	
Firmware version	

AZURA® Pump P 4.1S

Serial number
 Firmware version
 Operating time
 Installation date
 Last service date
 Motor operating time

AZURA® Pump P 2.1L

Serial number
 Firmware version
 Operating time
 Installation date
 Last service date

Leak Sensor

Serial number
 Firmware version

Motor

Operation time

Valve

Firmware version V2.1S
 Switching cycles
 Serial number

10.2 Checks - System Check



Note: The system check is based on reviewing the GLP data. The GLP check list in the following chapter summarizes the thresholds for passing the system check. Action resulting from the check are recommendations. Please consider the true state of your device before realizing.

Process	Figure
<ol style="list-style-type: none"> 1. Go to Checks & Tests and select Checks. 2. Activate the checkboxes to perform a system check. If you want only one device to be checked, activate the respective checkbox. 3. Press <Start>. 	

Fig.10 -2 System Check - overview



Note: When the system check is finished a summary of the test is shown (pdf file shown below). A system check cannot be performed for devices which are embedded in programs.

10.2.1 GLP check list

ASM 2.1L	<p>UVD 2.1S: After 2000 hours lamp operating time, the deuterium lamp should be replaced.</p> <p>P 4.1S: After 1000 hours, the pump heads should be maintained.</p> <p>V 2.1S/VICI: After 50000 switching cycles, the rotor seal should be replaced.</p>
AS 3950/AS 6.1L	<p>After 12500 injector valve cycles, a preventative maintenance procedure should be carried out.</p>
DAD 6.1L	<p>After 2000 hours deuterium lamp operating time, the deuterium lamp should be replaced. After 1000 hours halogen lamp operating time, the halogen lamp should be replaced.</p>
RID 2.1L	<p>After 20000 hours lamp operating time, the LED lamp should be replaced. After 1 year, the span should be checked.</p>
UVD 2.1S & LMWD 2.1L/DAD 2.1L	<p>After 2000 hours lamp operating time, the deuterium lamp should be replaced.</p>
P 4.1S	<p>After 1000 hours, the pump heads should be maintained (saved only in data base, this means only valid for one tablet; no check is carried out if the pump head has been changed or maintained).</p>
P 6.1L/ P2.1L	<p>After 7000000 cycles, the pump heads should be maintained.</p>
V 2.1S, VICI or V 4.1	<p>After 50000 switching cycles, the rotor seal should be replaced.</p>



11. Logs & Errors

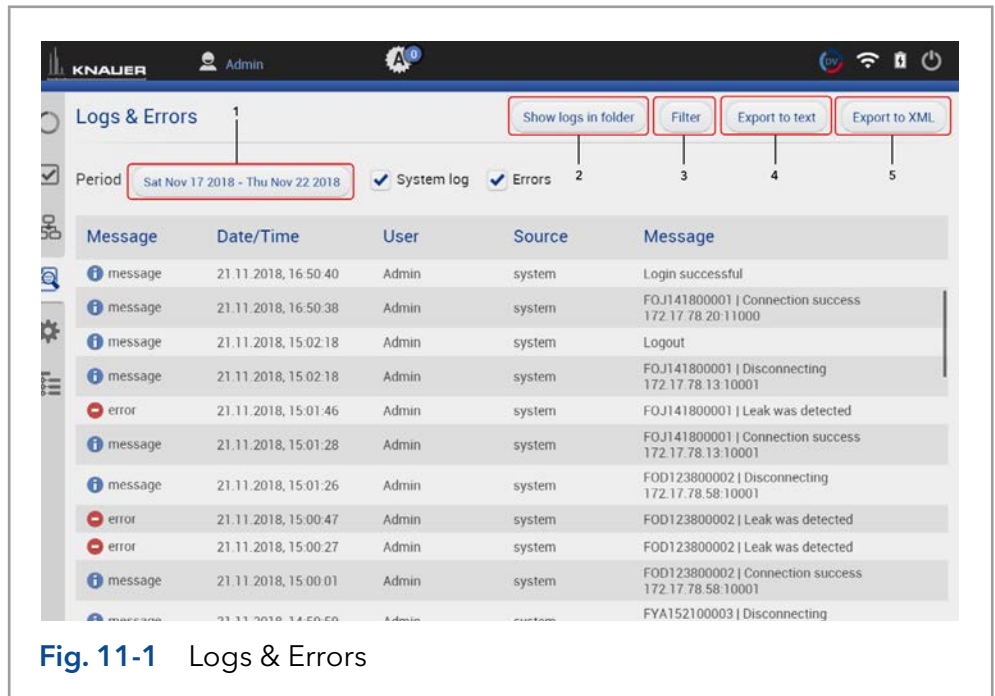


Fig. 11-1 Logs & Errors

Legend

- ① **Period:**
Define a time period showing the recorded logs and errors. Press the button and enter two dates which define the period.
- ② **Show logs in folder:**
Opens the folder C:\Mobile Control\Logs.
- ③ **Filter:**
Filters the results dependent on the user and the device.
- ④ **Export to text:**
Exports a textfile in the C:\Mobile Control\Logs.
- ⑤ **Export to XML:** Exports a XML file in the C:\Mobile Control\Logs.



Note: System logs are activated by default and can be deselected in Settings > Preferences. Recording of communication logs is deactivated by default. Activation of communication logs is described in the following chapter 11.1.



Note: In case of any error caused by a device, the pump will be stopped and the column thermostat will be switched off. Only exception are stand alone compact pumps AZURA® P 4.1S /P 2.1S

11.1 Activation of communication log

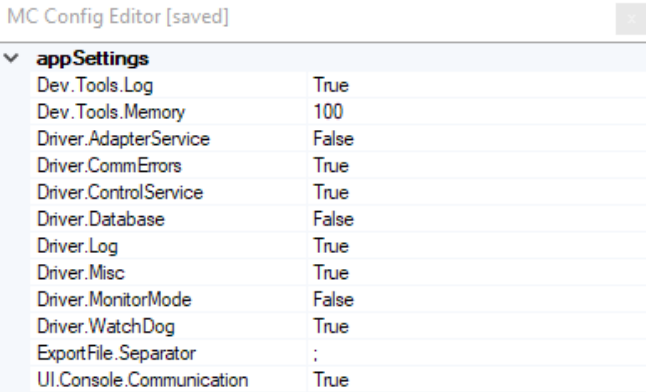
Process	Figure																								
<ol style="list-style-type: none"> 1. Start the ConfigEditor.exe to set the communication logs. The separate tool is located in C:\Program Files (x86)\Mobile Control\ConfigEditor.exe. 2. Select "Debug" and press apply. Activate Mobile Control before selecting the logs. 	 <p>The screenshot shows a window titled "MC Config Editor [saved]". Under the "appSettings" section, there is a list of configuration items with their corresponding values:</p> <table border="1"> <tr><td>Dev.Tools.Log</td><td>True</td></tr> <tr><td>Dev.Tools.Memory</td><td>100</td></tr> <tr><td>Driver.AdapterService</td><td>False</td></tr> <tr><td>Driver.CommErrors</td><td>True</td></tr> <tr><td>Driver.ControlService</td><td>True</td></tr> <tr><td>Driver.Database</td><td>False</td></tr> <tr><td>Driver.Log</td><td>True</td></tr> <tr><td>Driver.Misc</td><td>True</td></tr> <tr><td>Driver.MonitorMode</td><td>False</td></tr> <tr><td>Driver.WatchDog</td><td>True</td></tr> <tr><td>ExportFile.Separator</td><td>:</td></tr> <tr><td>UI.Console.Communication</td><td>True</td></tr> </table>	Dev.Tools.Log	True	Dev.Tools.Memory	100	Driver.AdapterService	False	Driver.CommErrors	True	Driver.ControlService	True	Driver.Database	False	Driver.Log	True	Driver.Misc	True	Driver.MonitorMode	False	Driver.WatchDog	True	ExportFile.Separator	:	UI.Console.Communication	True
Dev.Tools.Log	True																								
Dev.Tools.Memory	100																								
Driver.AdapterService	False																								
Driver.CommErrors	True																								
Driver.ControlService	True																								
Driver.Database	False																								
Driver.Log	True																								
Driver.Misc	True																								
Driver.MonitorMode	False																								
Driver.WatchDog	True																								
ExportFile.Separator	:																								
UI.Console.Communication	True																								

Fig. 11-2 Log files



Note: Log files are saved in C:\Mobile Control\Logs. Mind the hard disk space if logs are activated.

12. Data Viewer



Note: Installation of the Data Viewer is a separate installation step and similar to the installation of Mobile Control. Activation of the software is not necessary

Process

1. Press the first button on the upper right side of the screen
2. A new window opens.

Figure



Fig.12-1 Open Data Viewer

3. Data Viewer is loading.



Fig.12-2 Data Viewer - Start screen

12.1 Load a chromatogram

Process	Figure
---------	--------

- The interface is similar to Mobile Control Interface.
- Select <Choose file> to load a measurement into the Data Viewer.

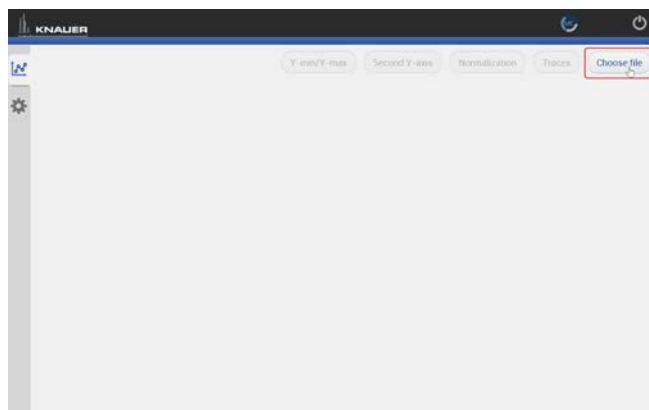


Fig.12-3 Data Viewer - Overview

- Select aaa and confirm with <OK>. By default, Mobile Control saves all result files in C:\Mobile Control\Projects\Project folder*\Results\Queue_date_time.
* The project folder is named default or can be renamed in Mobile Control settings > user management.

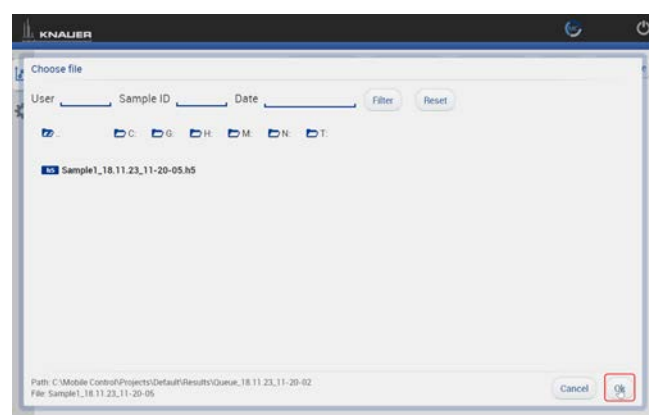


Fig.12-4 Data Viewer - Select run

- The chromatogram is displayed.

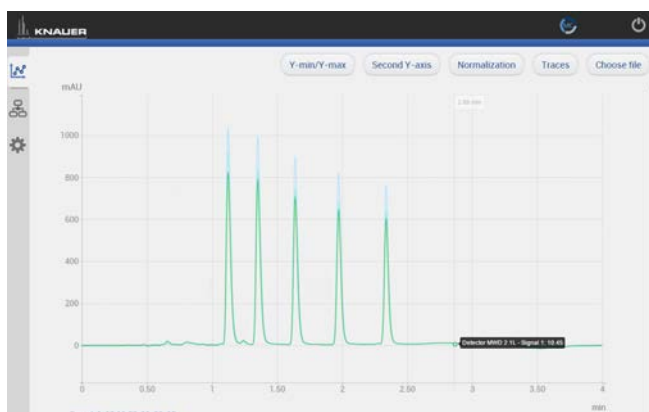


Fig.12-5 Data Viewer - Chromatogram

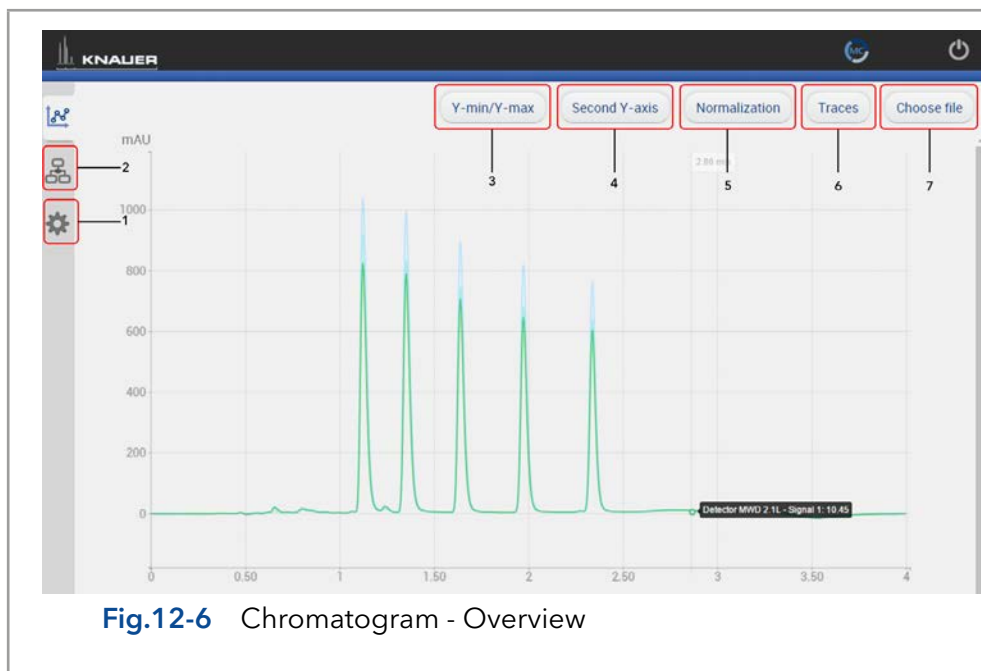


Note: The selection of traces in the chromatogram view of Mobile Control is saved in the result file. The Data Viewer shows the chromatogram in the same view as it was recorded in Mobile Control.



Note: The data format of Mobile Control result files is *.h5.

12.2 Chromatogram window



Legend

- | | |
|-----------------|--|
| ① Programs | Displays the details of the program and the integration parameters for analysis. Further, there is the option to create reports and to export the traces. |
| ② Settings | Change the appearance of the chromatogram or the units of traces. Information on the Data Viewer are shown. |
| ③ Second Y-axis | For one of the active traces a 2nd y-axis can be added. The 2nd y-axis on the right shows the unit and the scale for the selected trace. The trace is automatically normalized. |
| ④ Y-min/Y-max | Set the minimum and maximum value of the y-axis for each trace. |
| ⑤ Normalization | Traces can be normalized to other traces. This function allows you to normalize one or more chromatograms to the first chromatogram, adjusting the heights such that the apex height of a selected peak matches that of the peak selected on the first trace |
| ⑥ Traces | Select the traces to be displayed in the chromatogram. <ul style="list-style-type: none"> ■ Detector signal ■ Auxiliary traces ■ Method traces |
| ⑦ Choose file | Load a chromatogram. |



The chromatogram window of Data Viewer is similar to Mobile Control. Regarding the functions of this view please refer to chapter 8.

12.2.1 Overlay of two measurements

Process

1. After a first result file has been opened, select <Choose file>.

Figure

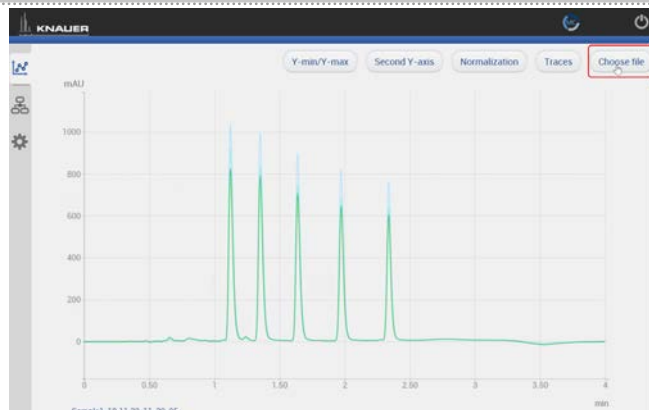


Fig.12-7 Data Viewer - Overlay

2. Select the second result file.
3. Confirm with <OK>.

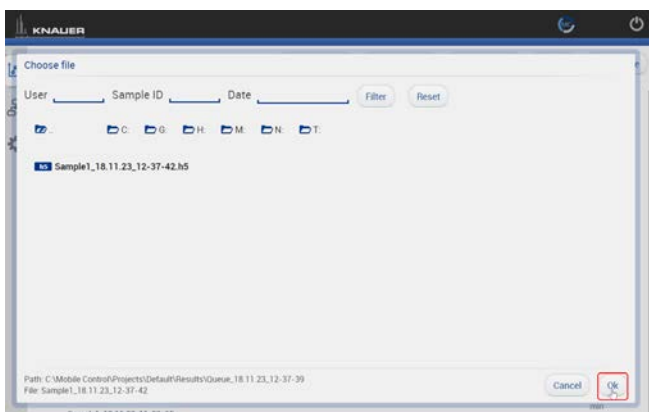


Fig.12-8 Data Viewer - Overlay

4. Both measurements are displayed in the chromatogram window.

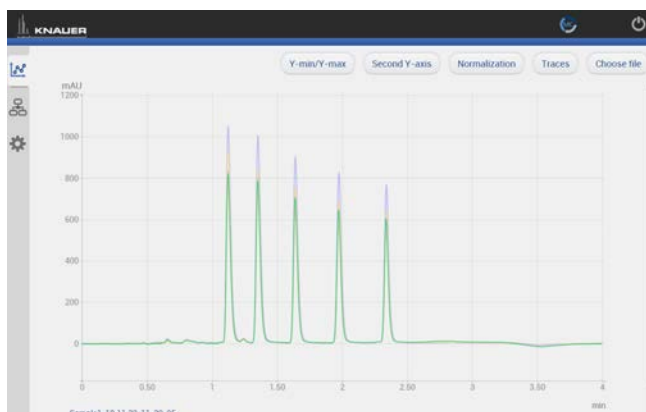


Fig.12-9 Data Viewer - Overlay

5. If you want to close one measurements go to Programs.
6. Choose the measurement, you want to delete.
7. Select <Close>.

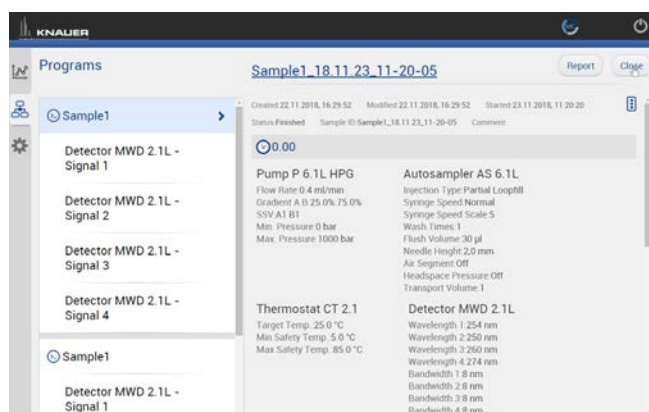


Fig.12-10 Data Viewer - delete measurement

12.3 Programs

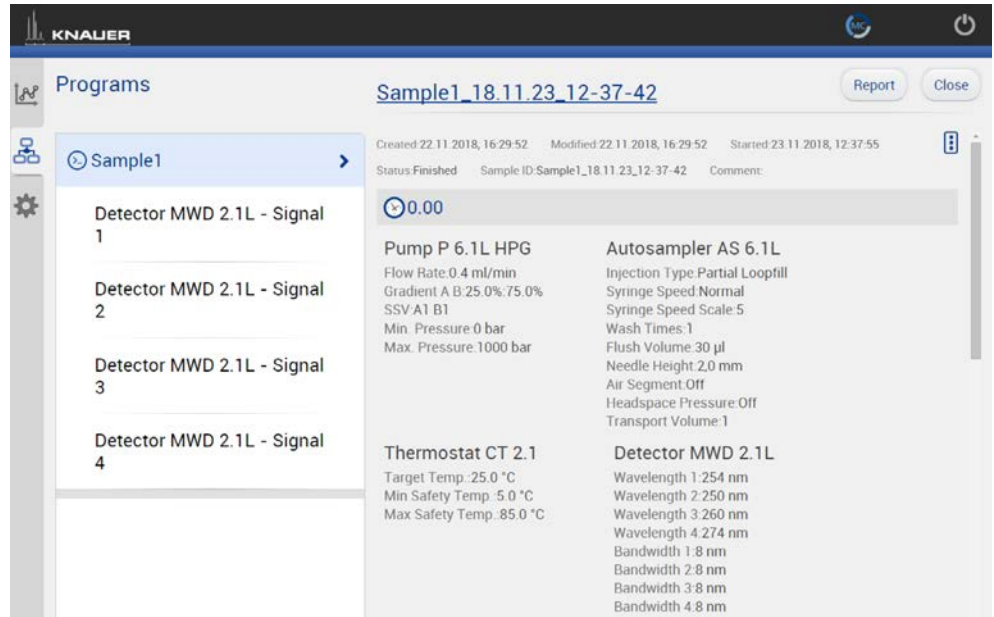


Fig.12-11

The file name is linked to the folder including the result file. Choose the sections System Configuration, Program, Results to be included in the report. The results of the chromatogram analysis, as well as the traces of the chromatogram can be exported in ASCII format. The report and the exported files are saved in a separate folder which is created in the folder of the result file.

Details of the program which were basis to record the chromatogram are shown.

12.3.1 Integration Parameters

Each detector signal can be analysed. It is possible to define separate integration parameters for each trace.

Legend

- ① **Apply**
Starts the calculation of the measurement.
- ② **Cancel**
The calculation is aborted.

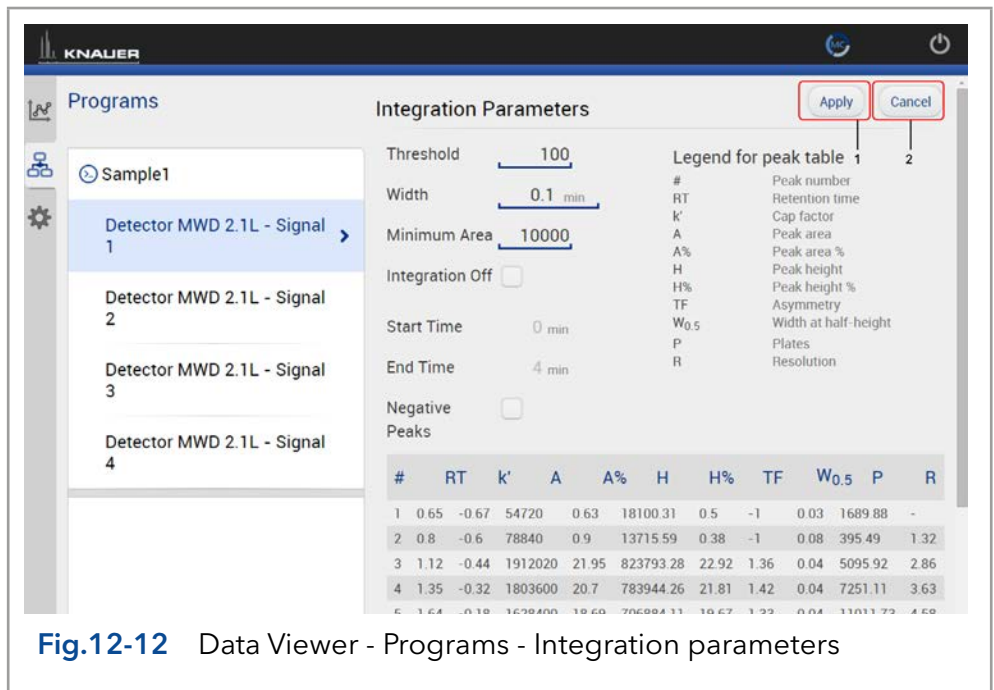


Fig.12-12 Data Viewer - Programs - Integration parameters

For each peak two different annotations can be defined. The following annotations are available:

- Peak number
- Retention time
- Peak Area
- Peak Area [%]
- Height
- Height [%]
- Asymmetry
- Platen numbers
- Resolution
- Width

Two Integration events are required for each run: Width, and Threshold. These parameters are used to detect peak start, stop, and apex, and to distinguish true peaks from noise.

Width

The Width is used to calculate a value for smoothing, the data points before the integration algorithm is applied. In most circumstances, an initial Width value based on the narrowest peak in the chromatogram will be adequate for proper integration of all peaks.

Threshold

This parameter is the first derivative, used to allow the integration algorithm to distinguish the start and stop of peaks from baseline noise and drift. The recommended Threshold value is based on the highest first derivative value determined in that section of the chromatogram.

Minimum Area

The Minimum Area parameter is used to reject unwanted peaks in the chromatogram. A value of e.g. 1000 will omit all peaks with an area of smaller than 1000.

After entering of integration parameters and pressing the apply button the chromatogram will be re-processed and analysed. The integration table will be updated automatically.

Process

1. Load the result file.
2. Go to PROGRAMS.
3. Deactivate the checkbox „Integration off“.
4. Set the parameter.
5. Confirm with <Apply>.
6. All results are displayed below the integration parameters.
7. You can export the results by pressing <Report >. data format is ASCII.

Figure

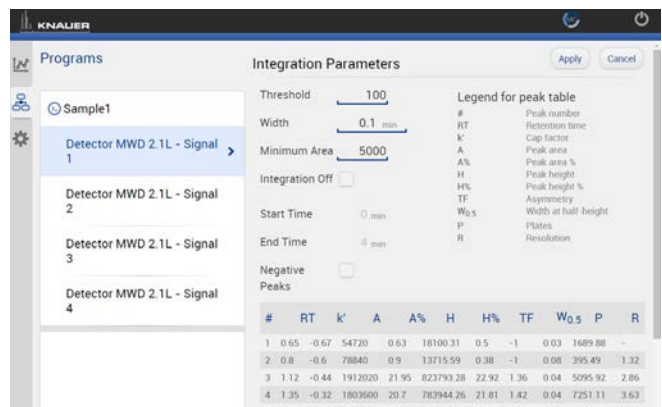


Fig.12-13 Integration parameters

12.4 Settings

12.4.1 Appearance

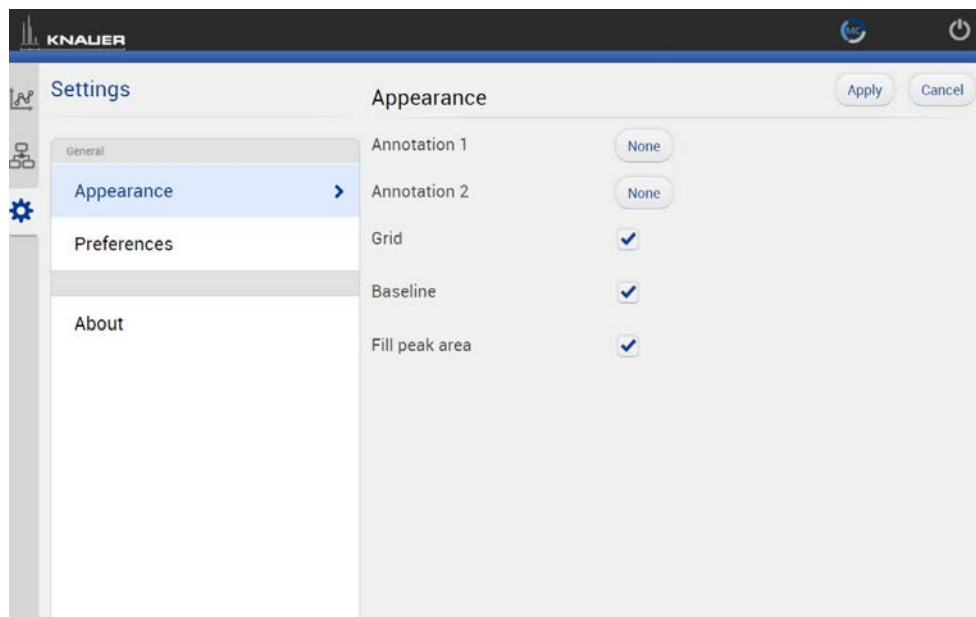


Fig.12-14 Data Viewer - Settings - Appearance

The appearance of the chromatogram can be adapted in the settings window. The following check boxes are available:

- Grid: Activate or deactivate
- Baseline: Hide or unhide
- Fill peak: The area below the integrated peak can be filled with solid color

12.4.2 Preferences

This chapter describes how to change the units of the traces can be changed. Always confirm your selection with <Apply>.

Pressure Units Selection between bar, MPa and psi.

System Detector Units Selection between AU, mAU, μ AU (UV detectors), mRIU, μ RIU, nRIU (RI detectors).

Temperature Units Selection between Celsius $^{\circ}$ C and Fahrenheit $^{\circ}$ F.

12.4.3 About

The version of the installed Data Viewer is shown.



13. Firmware Wizard



Note: Installation of the Firmware Wizard is a separate installation step and similar to installation of Mobile Control. Activation of the software is not necessary

The Firmware Wizard can be used to:

- Change LAN settings. If supported by your PC a direct LAN connection with selected devices can be used. Otherwise use a switch/ router. Please find a list of AZURA® devices with corresponding firmware versions below in chap. 2.3.
- Update firmware of connected devices.

You can download the firmware wizard form our website. It is included in the Mobile Control download folder. For download instructions, please refer to chap. 3.1.

13.1 Reset LAN settings

Please refer to Table 13-1 for the minimal firmware versions of the device and the version of the Firmware Wizard. The LAN settings can be changed for AZURA® devices with the listed or higher version.

Process

1. Open the software.
2. Select <Reset LAN Settings...>.
3. A new window opens.

Figure

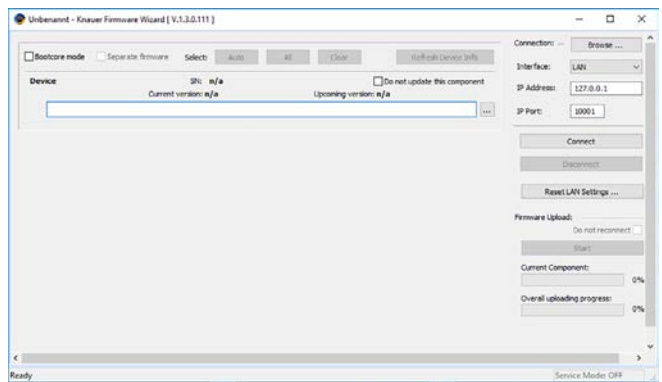


Fig. 13-1 Menu Firmware Wizard

4. Enter the serial number or the MAC address of the AZURA® device.
5. Select
 - fixed IP address (enter IP address, subnet mask, and default gateway) or
 - DHCP (obtain an IP address automatically).
6. Press <Reset Conn. Settings>.
7. We recommend a restart of the devices, to accept new LAN settings.

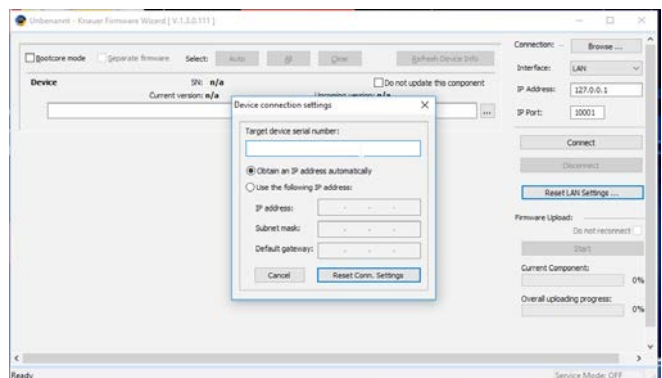


Fig. 13-2 Change LAN Settings

13.2 Update firmware version of connected devices

This chapter contains detailed information on how to perform an update of all possible firmware components for the various devices.



Note: The firmware update of other KNAUER devices (Smartline, BlueShadow) is possible but not fully supported. In case of issues please contact KNAUER.

Firmware Wizard V1.03.000.190 or higher

Device type	Type	Firmware upload via LAN	Minimum required firmware version	Change LAN settings
Assistant	AZURA® ASM 2.1L	LAN	V1.13	✓
	AZURA® ASM 2.2 L	LAN	V1.08	✓
Column Thermostat	AZURA® CT 2.1	only via RS-232	V1.06	✓*
Detector	AZURA® RID 2.1L	LAN	V1.15	✓
	AZURA® UVD 2.1L	LAN	V2.05	✓
	AZURA® DAD 6.1L	LAN	V1.23	✓
	AZURA® DAD 2.1L	LAN	V1.10	✓
	AZURA® MWD 2.1L	LAN	V1.10	✓
	AZURA® UVD 2.1S	LAN	V1.11	✓
	AZURA® CM 2.1S	only via RS-232	V1.06	✓*
Pump	AZURA® P 6.1L	LAN	V1.05	✓
	AZURA® P 2.1L	LAN	V1.09	✓
	AZURA® P 2.1S	only via RS-232	V1.37	✓*
	AZURA® P 4.1S	only via RS-232	V1.37	✓*
Valve	AZURA® V 2.1S	no	V5.01	✓*
	AZURA® V 4.1	no	V5.68	✓

Table 13-1 List of AZURA® devices with minimal required firmware versions for firmware upload or change of LAN settings.

* Changing LAN settings by entering the serial number requires that the device has been found by Firmware Wizard after browsing. Changing LAN settings by MAC address does not require that the device has been found after browsing. The IP address can be part of another network.

Process

1. Open the software.
2. Ensure to be connected with the network which includes the device.
3. Select <Browse>. A new window is opened.

Figure

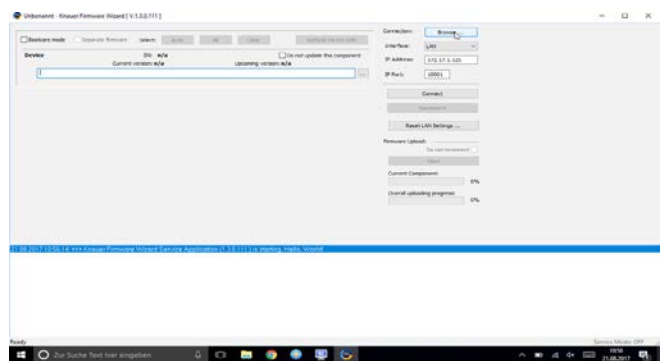


Fig. 13-3 Menu Firmware Wizard

4. Select <Browse>. A list of connected devices is displayed.
5. Select the device you want to update and press <Select>.

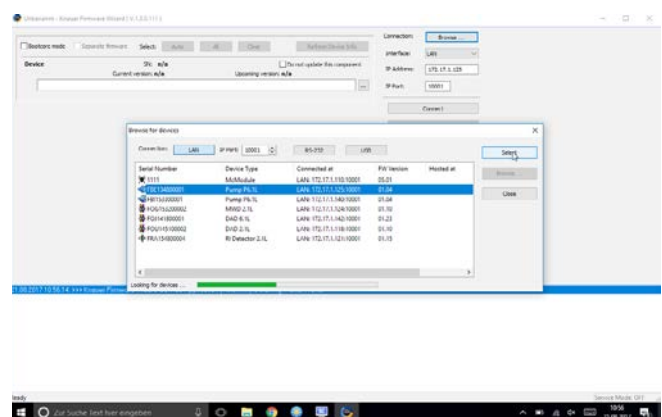


Fig. 13-4 Select device

6. Press <Connect>.

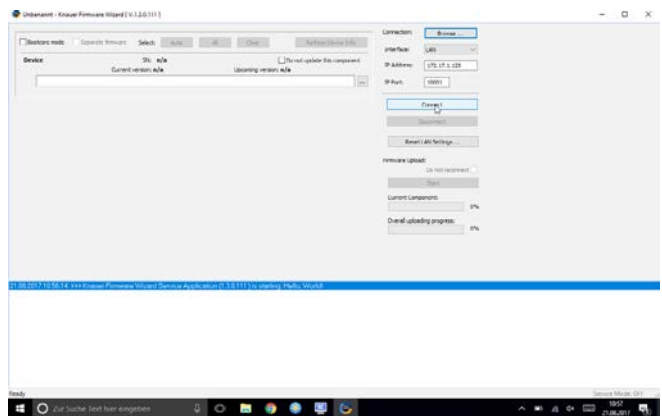


Fig. 13-5 Connect with device

- 7. After successful connection you see a status message in the lower part of the screen.
- 8. In this example the firmware wizard is connected with a pump.
- 9. Check the displayed current firmware version.
- 10. Press the shown button to import the update file.

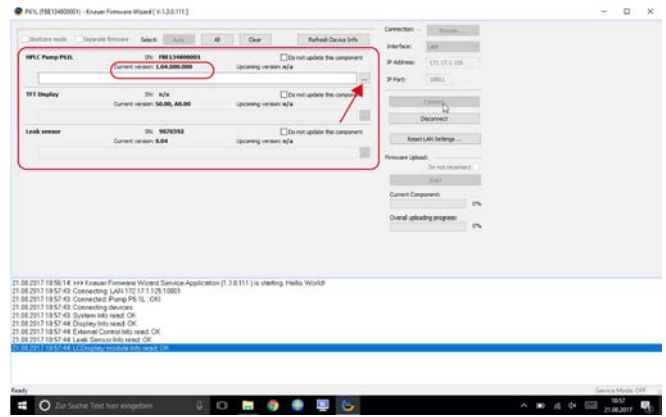


Fig. 13-6 Import the update file

- 11. Import the update file.

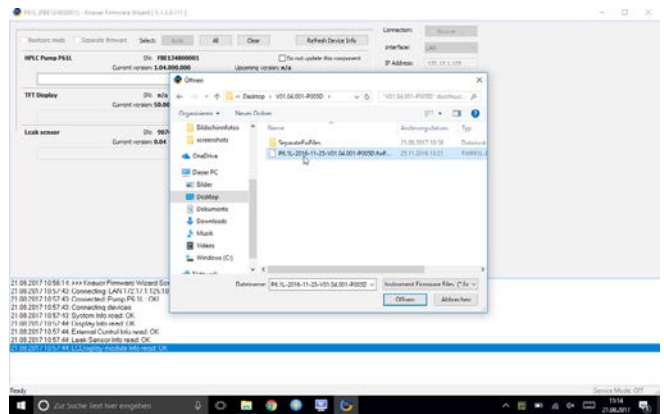


Fig. 13-7 Import the update file

- 12. If the version of the update file you want to is older then the installed version you see a red warning symbol on the left.

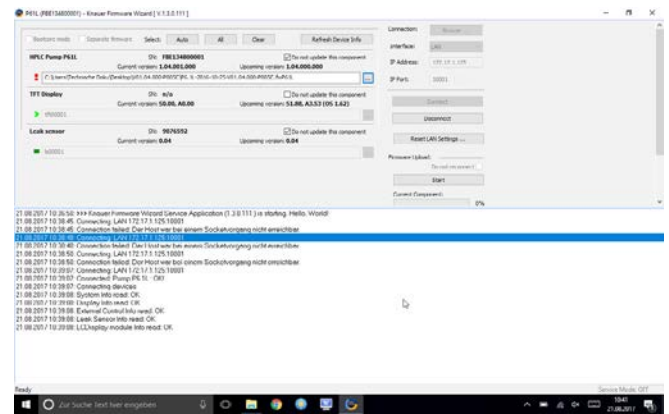


Fig. 13-8 Check the imported version

- 13. If the version of the update file you want is newer then the installed version you see a green arrow on the left. You can decide which devices should be updated and which not, by activating the checkbox „Do not update this component“.

- 14. Press <Start>.

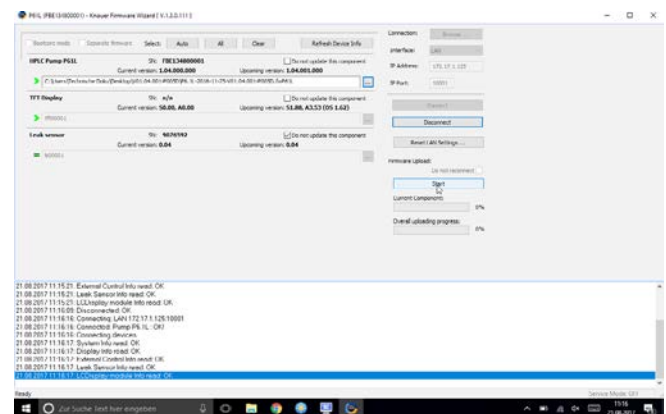


Fig. 13-9 Check the imported version

- 15. You can observe the update process on the lower right side of the screen.

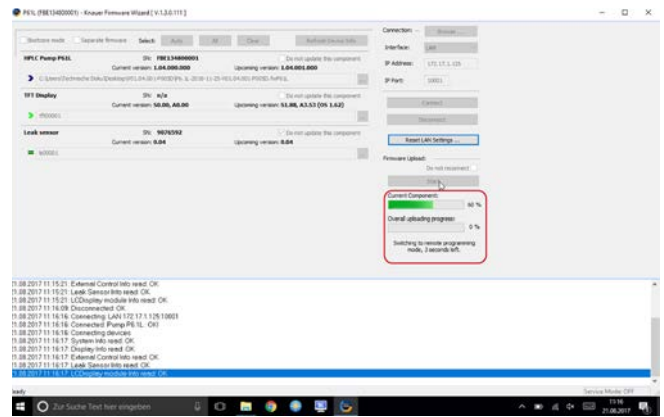


Fig. 13-10 Start update process

- 16. After successful update process, a status message is shown.
- 17. Press <Disconnect>. When the upload is complete and successful, a green tick on the left side of the component line will be shown. The Firmware Wizard can be closed.
- 18. We recommend a restart of the devices, to accept new LAN settings.

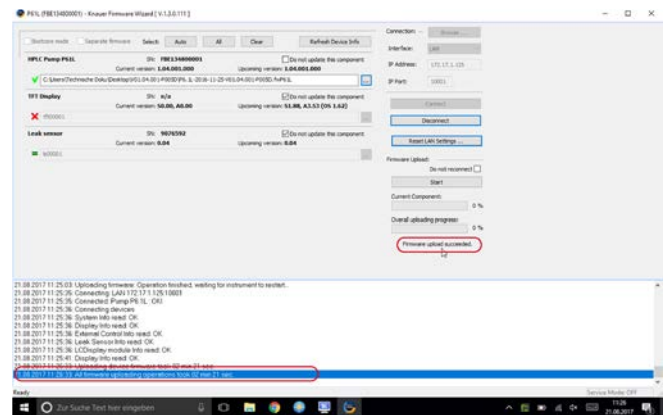


Fig. 13-11 Finished update process

14. Troubleshooting

If you are facing problems with the operation of Mobile control, follow the steps below

Steps

1. Restart of Mobile Control.
2. Restart of Tablet, Devices, Router.
3. Check Windows settings (Firewall, Defender, overdue Windows Updates).
Find more information in the release notes.
4. Remove system configuration and create a new one.
5. Delete C:\MobileControl (or rename the folder to keep the data) and create a new user (new activation of Mobile Control).
6. Uninstall Mobile Control and delete C:\Mobile Control. Install Mobile Control again.
Activate the software using the activation code.
7. Contact Customer Support providing following information:
 - Versions of firmware, Mobile Control; Make screenshots
 - Activate Mobile Control Communication Logs (refer to chapter 11.1).
 - Reproduce the Mobile Control issue and provide the log files.
 - Check Windows Event Viewer.

15. Repeat Orders

This list for reorders is valid for the time the document has been published. Deviations afterwards are possible.

For reorders of spare parts use the enclosed packing list. Contact the Technical Support in case there are any questions on spare parts or accessories.

Further information

Further information on spare parts and accessories can be found online: www.knauer.net

	Descriptions	Order No.
Documents	Software instructions	V6851-2
	Installation information	V6852A
	Upgrade information	V6854
	Update information	V6853
	Mobile Control Certificate	V9610
Mobile Control	Mobile Control Chrom license without data acquisition, including 10" tablet, power supply and tablet mount	A9607
	Mobile Control Chrom license with data acquisition, including 10" tablet, power supply and tablet mount	A9608
	Mobile Control Chrom license without data acquisition	A9610
	Mobile Control Chrom license with data acquisition	A9612
	Upgrade license Mobile Control to Mobile Control Chrom	A9614
Tools	Mobile Control Mount flexible tablet mount for 7"-10" tablets	A9617
	USB-LAN ADAPTER Network adapter USB 2.0 <-> 10/100 Ethernet for tablets	A96181
	WLAN Router, 8-port Gigabit RJ-45	A64809
	WLAN Router with international power supply with plug, 8-port Gigabit RJ-45	A64809INT
	Single device WLAN router for Mobile Control 1xRJ45, 10/100 MBit, WLAN, WLAN router for single devices	A64811
	Tablet Lock with stand, SecuPlus Tablet Lock (silver)	A9615

APPENDIX A Configuration of flow and pressure



Note: Please read the corresponding technical documentation for handling and safety reasons.



When a constant system pressure is necessary, the pumps P2.1L and P6.1L can be set to isobar / constant pressure mode. The isobar (P2.1L) and constant pressure (P6.1L) modes were developed under standard HPLC conditions with standard system components. The parameters for pressure control are stored in the pump's firmware and cannot be modified by the user.

What's new? With the actual version of mobile control it is possible to obtain a constant pressure by varying the flowrate.

A 1.1 Minimum flow rate and maximum flow rate

Time out

The default time out is 30 s. If the pump does not reach the target pressure it will stop after the time out period and a message appears.

Minimum flow rate



Note: If you are not familiar with the system, do not change the parameters.

NOTICE
<p>Device defect</p> <p>When flow rate decreases below the minimum value, the following error message is displayed: Unable to attain min. flow setpoint</p> <p>The software program stops, but the pump is continuing to work.</p> <p>➔ For safety reasons, stop the pump manually.</p>

Target pressure

- Pressure which should be reached. Set this parameter to the required pressure

NOTICE
<p>Device defect</p> <p>When the pressure falls below/exceeds the target pressure, the following error message is displayed: Unable to attain pressure setpoint.</p> <p>The software program stops, but the pump is continuing to work.</p> <p>➔ For safety reasons, stop the pump manually.</p>

Minimum pressure p_{min} and maximum pressure p_{max}

Max. pressure is preset in accordance to p_{max} of the pump head. When p_{max} is reached, the pump stops automatically (safety function). Min. pressure is preset. When p_{min} is not reached, the pump stops after approx. 30 s.



Practical tip: If your column is very sensitive to pressure increase, you can lower the preset p_{max} .

A 1.2 Configuration

AZURA® P 2.1L

1. Select „Settings > Gradient Type“. A new window is opened.

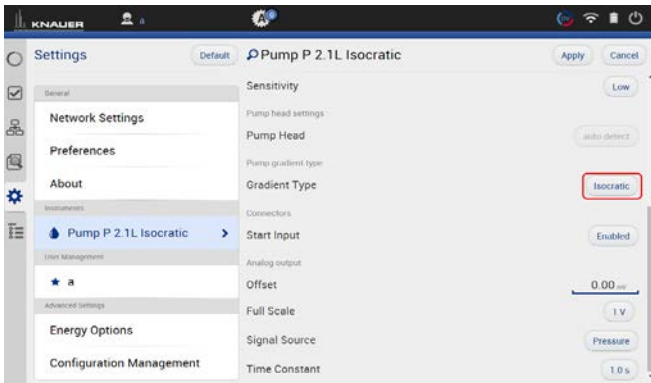


Fig. A-1 Gradient Type

2. Select „Isobar“ and confirm with <OK>. The window is closed.

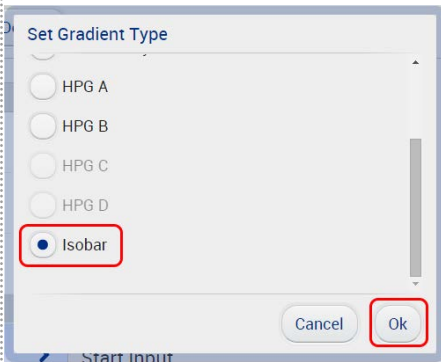


Fig. A-3 Set Gradient Type

3. The gradient type „isobar“ is displayed. Always confirm your selection by pressing <Apply>.

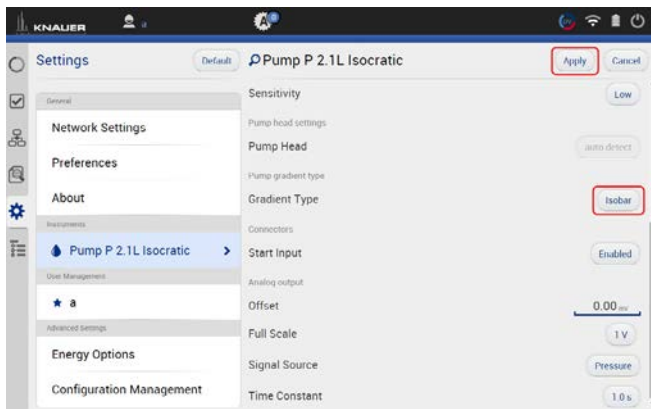


Fig. A-4 Confirm selection

AZURA® P 6.1L

1. Select „Settings“. Activate the Constant pressure button.

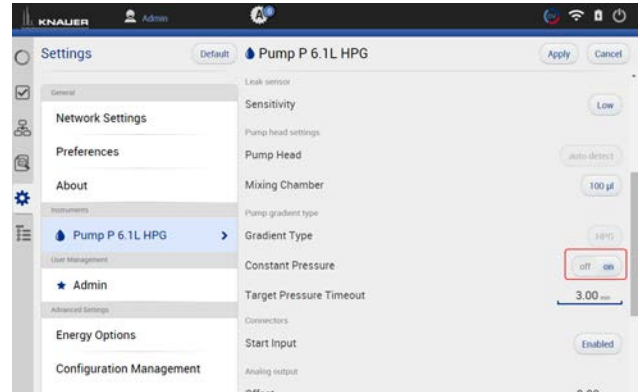


Fig. A-2 Constant Pressure

2. No action

3. The Constant Pressure button is activated. Always confirm your selection by pressing <Apply>.

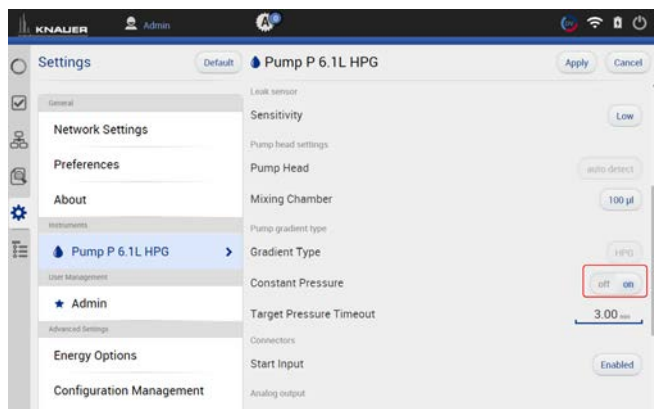


Fig. A-5 Confirm selection

4. A message on the bottom of the screen is shown „Parameter successfully applied“.

5. Select System Overview. You see a new tab called „Pump P 2.1L isobar“.



Fig. A-6 System Overview

5. Select System Overview. You see a new tab called „Pump P 6.1L HPG (gradient type)“.



Fig. A-7 System Overview

Next steps

Set the required parameters.

There are two different possibilities, explained in the next chapters (please refer to chap. A1.2.1 or chap. A1.2.2).

A1.2.1 Direct control

AZURA® P 2.1L

1. Select „Overview“ and click on the pump picture to enter the Detail View menu.

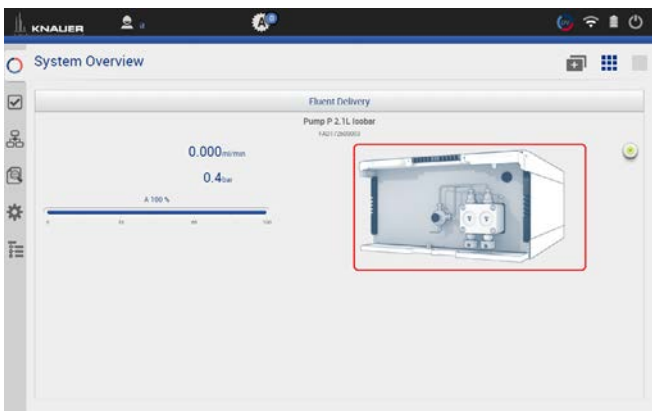


Fig. A-8 Direct control

AZURA® P 6.1L

1. Select „Overview“ and click on the pump picture to enter the Detail View menu.



Fig. A-9 Direct control

2. Set:
 - flow limits (min and max)
 - target pressure and
 - pressure limits (min and max)
3. Confirm your settings with <Apply>.

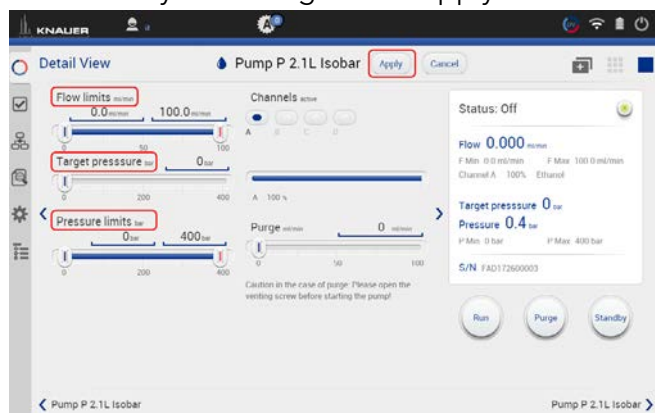


Fig. A-10 Set parameter

2. Set:
 - flow limits (min and max),
 - target pressure
 - pressure limits (min and max)
 - eluent composition
3. Confirm your settings with <Apply>.



Fig. A-11 Set parameter

4. The pumps start with selected configuration.



Practical tip: In this method you cannot monitor pressure and flow. Use the program sequence to monitor pressure and flow (explained below).

A1.2.2 Control via program sequence

AZURA® P 2.1L

AZURA® P 6.1L



Practical tip: With this method, you can monitor pressure and flow rate.

1. Select „Programs > Add a program“.

Parameters are preset as default.

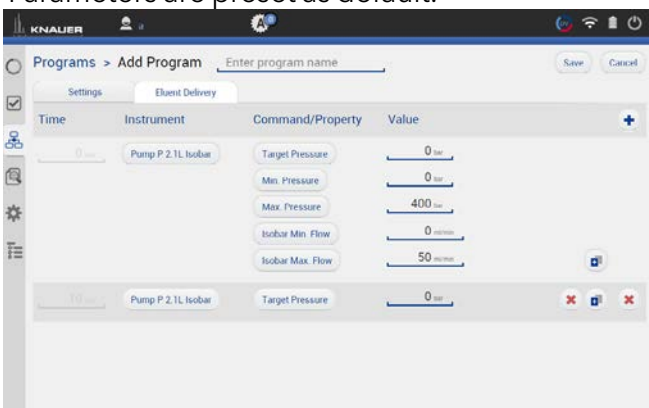


Fig. A-12 Add a program

1. Select „Programs > Add a program“.

Parameters are preset as default.



Fig. A-13 Add a program

2. Activate the checkboxes to monitor pressure and flow.

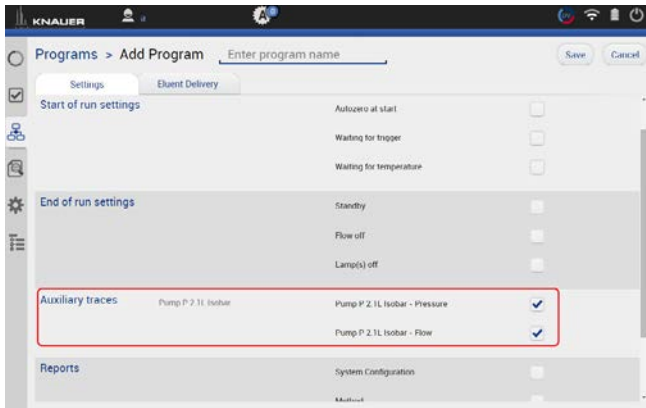


Fig. A-14 Auxiliary traces

2. Activate the checkboxes to monitor pressure and flow.

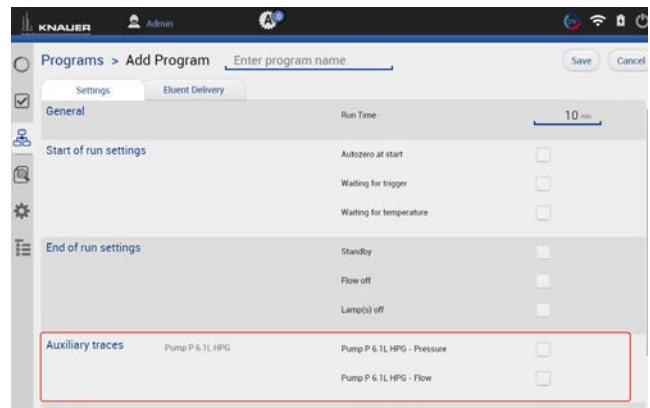


Fig. A-15 Auxiliary traces

Science Together



Latest KNAUER instructions online:
<https://www.knauer.net/en/Support/User-manuals>

KNAUER
Wissenschaftliche Geräte GmbH
Hegauer Weg 38
14163 Berlin

Phone: +49 30 809727-0
Fax: +49 30 8015010
E-Mail: info@knauer.net
Internet: www.knauer.net