



VIALINK Operating instructions

Document Change History

Vers.	Status:	Name:	Date:	Change:
V00	Released	MBe	25.8.2011	Document issued
V01	Released	IMe	30.08.2011	New name with part number
V02	Released	IMe	02.09.2011	Description compatibility pipettes & FW update
V03	Released	MBe	01.06.2012	Update for new VIALINK version 2.0
V04	In work	MBe	07.06.2013	Update for VIAFLO 384, other improvements
V04	Released	IMe	06.12.2013	Update for V3.0.x and ASSIST
V05	Released	MBe	13.08.2014	Update for V4.0
V06	Released	MBe	05.05.2015	Update for VIALINK V4.3, VIAFLO firmware 3.20 and ASSIST firmware 1.07
V07	Released	IMe	15.10.2015	Update for VIALINK V4.4, VIAFLO 96/384 firmware change
V08	Released	MBe	30.05.2017	Update for VIALINK V4.6.0, VIAFLO and VOYAGER firmware 3.40
V09	Released	MBe	12.12.2017	Update for VIALINK V4.7.0 and pipette firmware 4.01 (for new hardware generation 3).
V10	Released	MBe	28.03.2018	Update for VIALINK V5 and pipette FW 4.12
V11	Released	MBe	04.10.2018	Update for new FW: Pipette (4.15), V96/384 (3.12)
V12	Released	SSt	04.03.2020	Update for V5.3.0
V13	Released	MFr	21.04.2020	Update Pipette Communication Module
V14	Released	JBa2/ECe	13.08.2021	Update for V5.4.0, V5.5.0 (MINI 96)
V15	Released	Rpi	10.05.2022	Update System requirement recommendations for Resolution and scaling factor
V16	Released	Rpi	07.12.2022	Update VIALINK version from v5.5.x to v5.6.x
V17	Released	RPi	08.03.2024	Update VIALINK version to V5.7.x
V18	Released	RPi/SSt	12.03.2024	Removed redundant informations regarding compatibility, MAG and HEATMAG added

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Introduction

1.1 Purpose

VIALINK connects INTEGRA VIAFLO and VOYAGER electronic pipettes, MINI 96, VIAFLO 96, VIAFLO 384, ASSIST, ASSIST PLUS, MAG and HEATMAG modules to a computer. It allows creating and exchanging custom programs, uploading custom pictures for the start screen, creating a service history, and upgrading instruments with the newest firmware.

1.2 Scope

These operating instructions describe the installation and operation of VIALINK V 5.4.0 or higher.

2 System requirements

2.1 Personal computer / Laptop

CPU:	INTEL or AMD (not older than 5 years)
USB port:	2.0 / 3.0
Bluetooth:	optional
Memory:	> 2GB
Internet access:	highly recommended for installation and updates
Operating system:	MS Win 7, MS Win 8.x, MS Win 10
Framework:	Microsoft .NET 4.7.2 (or later)
Resolution:	1920 x 1080, Scaling/Zoom factor 100%

2.2 VIALINK compatibility and connectable devices

See compatibility information in the related documentation:
"Software_and_Firmware_update_history_VXX.pdf"

2.2.1 Hardware Generations

VIAFLO /VOYAGER	Firmware	Serial number
1 st generation	2.xx	1xxxxxx
2 nd generation	3.xx	6xxxxx
3 rd generation	4.xx	7xxxxx

VIAFLO 96 and VIAFLO 384		
1 st generation	2.xx	≤ 14090533 (V96) ≤ 14090226 (V384)
2 nd generation	3.xx	≥ 14090534 (V96) ≥ 14090227 (V384)

2.3 Programming Stand for electronic pipettes

The Programming Stand (PN 4211) needs to be connected to the USB port of your PC. It can be used to charge the pipette battery and enables the communication between the PC and the pipette.

2.4 Pipette Communication Module for VIAFLO/VOYAGER/D-ONE electronic pipettes

For a wireless communication the Pipette Communication Module (PN 4221) can be used instead of the USB Programming Stand. Updating the firmware is not possible using the wireless connection.

3 Installation of VIALINK

3.1 Preparation

- Download VIALINK from <http://www.integra-biosciences.com> in the download or product section.
- Unzip the ZIP-file into a temporary folder on your local drive (e.g. C:\temp\vialink or your desktop).

3.2 First time installation

- Log in to your computer with administrator log in.
- Run the setup routine and choose a directory where VIALINK should be installed (e.g. C:\Programs(x86)\Integra Biosciences AG\VIALINK). If you are not logged in as administrator, you may be prompted for the administrator login.
- VIALINK can also be installed on a network drive. Choose your network drive during installation.

3.3 Update VIALINK

- You can check for updates directly in the VIALINK application (Menu "Update") or you can reinstall by executing the setup of a new VIALINK version.
- Your actual pipette and custom program databases are resumed.

3.4 Running VIALINK without installation

- VIALINK can be run from a USB drive or any other program folder. Simply copy the installed directory (e.g. C:\Programs(x86)\Integra Biosciences AG\VIALINK) to your specific drive.

INTEGRA

3.5 Installation of hardware

The Programming (USB) Stand, MINI 96, VIAFLO 96, VIAFLO 384 or ASSIST and ASSIST PLUS require a hardware driver to be installed the first time they are connected to the computer.

- The driver is automatically installed on the computer if you are logged in as administrator and if you have an active internet connection.
- If you do not have access to the internet, you need to install the drivers manually. The required driver is packed in the setup file of VIALINK and is extracted to \Driver of your VIALINK installation directory.

4 Establishing a connection

4.1 Connect INTEGRA Electronic pipettes to your PC

- Start VIALINK.
- The following options are available to connect a pipette to your PC.

Connection type	Description
▪ USB	▪ To create and exchange custom programs, upload start up pictures and update the firmware. ▪ See section 4.1.1
▪ ComModule	▪ To create and exchange custom programs and upload start up pictures. ▪ See section 4.1.2
▪ Via ASSIST / ASSIST PLUS	▪ To create and exchange custom programs on pipettes, including ASSIST / ASSIST PLUS custom programs ▪ See section 4.1.3

-
- Upon establishing the connection successfully, the connector symbol turns green.



- To disconnect an active pipette, click on the green connector symbol and confirm.
-

4.1.1 Connection via Programming (USB) Stand (#4211)

- Connect the USB cable to the stand and a free USB port on your computer. Also connect the stand to the mains power supply. Then hang the pipette onto the stand.
- Go to the “Toolbox” of the pipette. In the menu “Communications” select “USB” on the pipette.
- Note:
- The Programming Stand can work without power supply. The power supply is required if the pipette is charged with the Programming Stand. To avoid a pipette shutdown due to low battery during work with VIALINK, we recommend to always connecting the Programming Stand to the power supply, especially when updating the pipette’s firmware.
- Do not connect/disconnect the power supply during the use of VIALINK.

4.1.2 Connection via ComModule

- Pipette and PC need to be paired for the first connection. Please refer to MS Windows Help to learn how to pair Bluetooth devices. The following pairing code may be required: 12345.

- Go to the “Toolbox” of the pipette. In the menu “Communications” select “ComModule”.

4.1.3 Connection via ASSIST and ASSIST PLUS

- Connect the ASSIST or ASSIST PLUS with the delivered standard USB cable (type A to B) to a free port on your computer.
- Switch the ASSIST or ASSIST PLUS on.
- Go to the “Toolbox” of the pipette. In the menu “Communications” select “Via ASSIST (PLUS)”.
- The pipette now connects to the ASSIST or ASSIST PLUS base unit and confirms with a message “Communication mode active”. Do not exit the communication mode by pressing BACK.
- In VIALINK the pipette should display as actively connected while ASSIST or ASSIST PLUS appears disconnected.

4.2 Connect MINI 96 to your PC

- Start VIALINK.
- Connect the MINI 96 with a standard USB cable (type C) to a free port on your computer.
- Activate the communication mode: Go to the “Settings”. In the menu “Communications” select “USB” and press “OK” to enter the communication mode.
- A successful connection is indicated by the green connector symbol.
- To disconnect the MINI 96, click the green connector symbol or simply switch off the unit.

4.3 Connect VIAFLO 96 and VIAFLO 384 to your PC

- Start VIALINK.
- Connect the VIAFLO 96 and VIAFLO 384 with a standard USB cable (type A to type B) to a free port on your computer.
- Activate the communication mode: Go to the “Toolbox” and enter the menu “Communications”. Press “OK” to enter the communication mode (on previous models turn “Serial” to “ON”).
- A successful connection is indicated by the green connector symbol.
- To disconnect VIAFLO 96 and VIAFLO 384, click the green connector symbol or simply switch off the unit.

4.4 Connect ASSIST and ASSIST PLUS to your PC

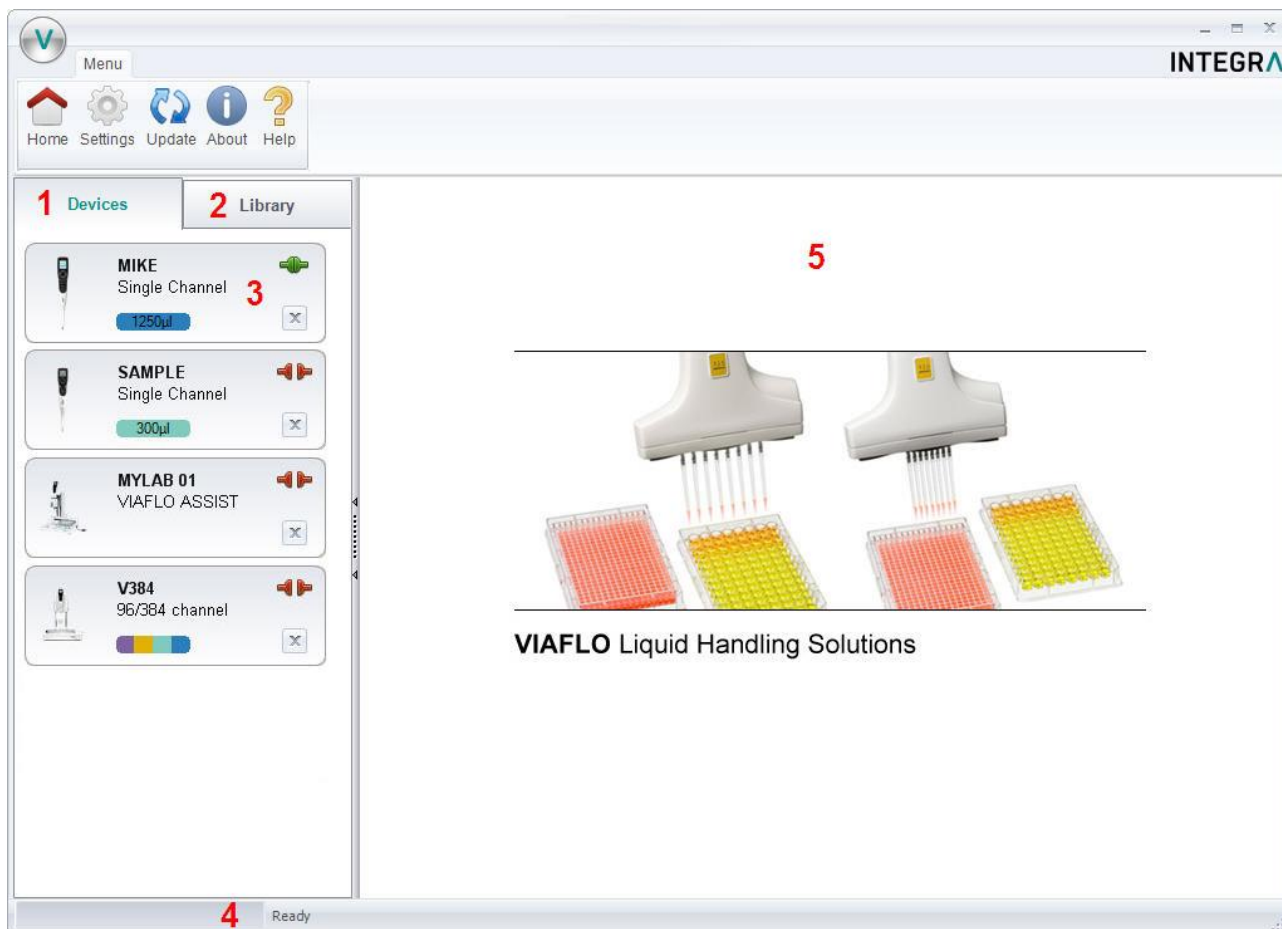
- Start VIALINK.
- Connect the ASSIST and ASSIST PLUS with a standard USB cable (type A to type B) to a free port on your computer.
- Switch the ASSIST and ASSIST PLUS on.
- A successful connection is indicated by the green connector symbol.
- To disconnect ASSIST and ASSIST PLUS simply switch off the unit.

4.5 Connect MAG and HEATMAG to your PC

- Start VIALINK.
- Connect the MAG and HEATMAG with a standard USB cable (type A to type C) to a free port on your computer.
- Switch the MAG and HEATMAG on.
- A successful connection is indicated by the green connector symbol.
- To disconnect MAG and HEATMAG simply switch off the unit.

5 Operation

5.1 Main screen



- 1 **Devices:** Here you will see all instruments that have been connected to VIALINK. A green symbol indicates an actively connected instrument, the red symbol a disconnected instrument.
- 2 **Library:** This is the custom program library on your computer. New programs can be created, or existing programs can be modified.
- 3 **Click on the pipette field** to see all pipette menus.
- 4 **The status bar** indicates the progress of an ongoing process.
- 5 **Main window:** Showing all pipette menus. You have to select a pipette from the left before menus are shown.

5.2 Creating and editing custom programs

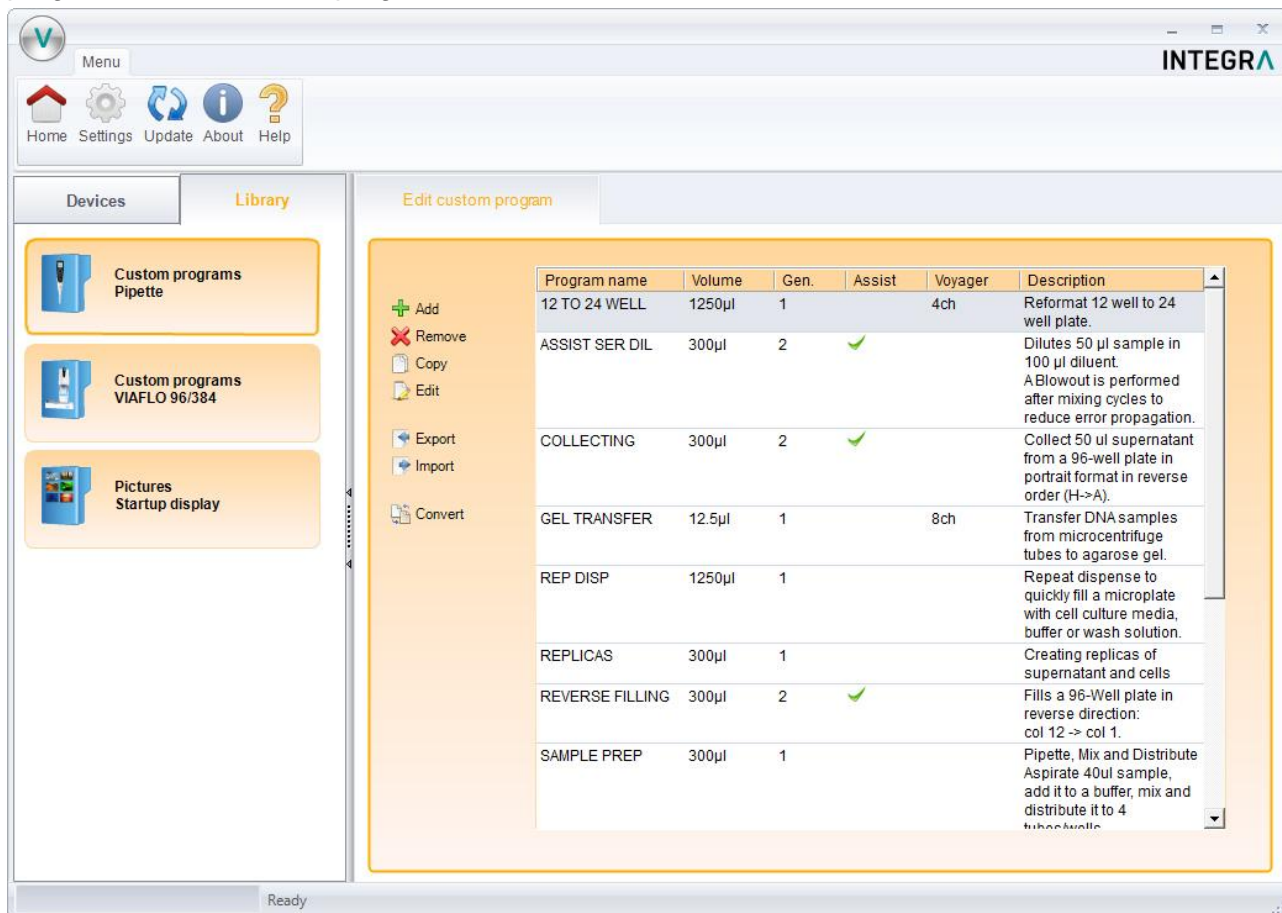
With VIALINK you can create and store custom programs for VIAFLO/VOYAGER electronic pipettes, MINI 96, VIAFLO 96, VIAFLO 384, ASSIST and ASSIST PLUS on your computer. This enables you to distribute a program to multiple pipettes or store programs in the local library as back up. It also makes creating complex programs easier.

There are two options to create custom programs.

- In the library of VIALINK. Programs are stored locally in the VIALINK folder and can be edited any time.
- In the program organizer of the pipette. Programs are stored only on the pipette, but they can be copied to the local library. This mode allows active teaching of positions for VIAFLO 96, VIAFLO 384, MINI 96, ASSIST and ASSIST PLUS programs.

5.2.1 Local program library

- The “Library” tab opens the custom program and picture library.
- Select the appropriate library: Pipettes, MINI 96 or VIAFLO 96 and VIAFLO384.
- Use “Add” to create a new custom program, “Remove” to delete a custom program from the library, “Copy” to duplicate an existing program or “Edit” to change parameters of an existing program.
- “Export” allows to export a custom program as *.xml file and “Import” lets you import a custom program from a *.xml file.
- “Convert” allows converting a custom program from one library to the other. E.g. a Pipette program to a VIAFLO 96 program.



Note:

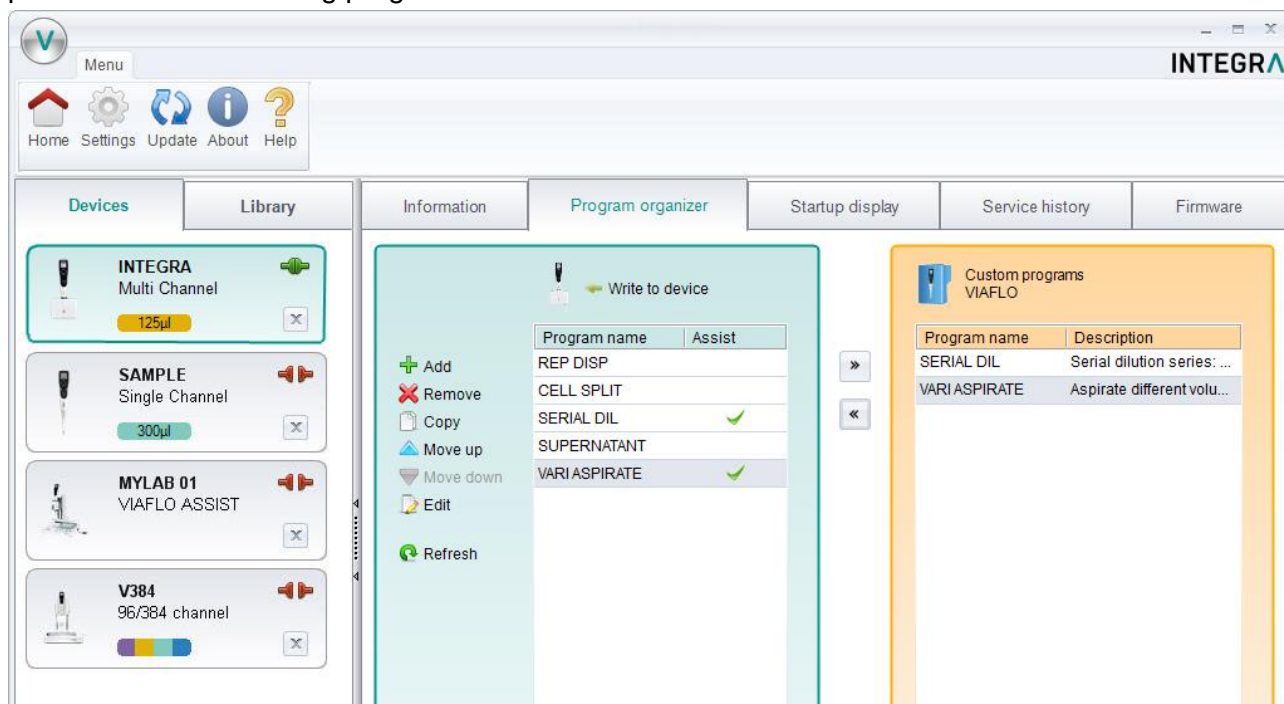
- VIALINK does not distinguish between VIAFLO 96 and VIAFLO 384 programs. The programs are compatible with both units and are stored in the combined VIAFLO 96 and VIAFLO 384 program library.
- The library for pipettes distinguishes between programs for pipettes of hardware generation 2 and 3, indicated in the column “Gen.” The generation needs to be defined when creating a new program. Programs can be easily converted from one generation to another by changing the flag.
- ASSIST and ASSIST PLUS custom programs are in the pipette library and are marked with a green check mark symbol in the column “ASSIST” or “ASSIST PLUS”.

5.2.2 Program organizer

- The procedure to create a custom program in the program organizer is the same as in the local library. The same program steps are available but in addition the program organizer

allows active teaching of positions (Move X/Z and Move Z steps) for VIAFLO 96, VIAFLO 384, ASSIST and ASSIST PLUS programs.

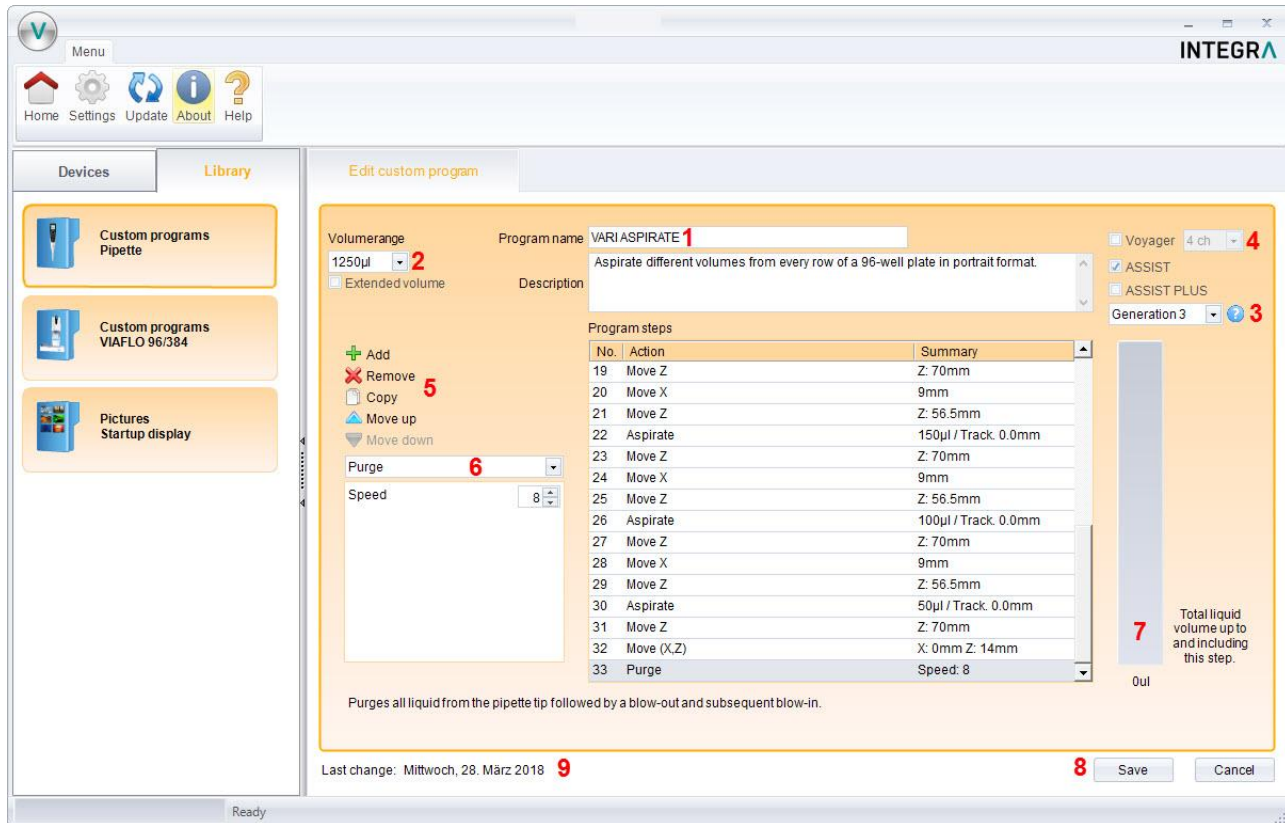
- The instruments need to be actively connected (green plug symbol) as described in section 4 to allow editing in the program organizer.
- Select the active device from the device list: Pipette, MINI 96 or VIAFLO 96 and VIAFLO 384.
- Use “Add” to create a new custom program, “Remove” to delete a custom program from the green Program organizer, “Copy” to duplicate an existing program or “Edit” to change parameters of an existing program.



- Note:
Programs created in the program organizer (green box) are stored on the connected pipette. They can be copied to the local library (orange box) of your PC using the arrow buttons.

5.2.3 Creating a new program

- In the **library** or in the **program organizer**, click “Add” to create a new program.
- Double click on the new program, which was given a generic name, e.g. “Program 1”.
- Follow the steps below exemplified for the library:



- 1 Enter a name for the program and add a description. The description is displayed only in VIALINK but not on the pipette itself.

- 2 Select the volume range of the pipette.

- 3 Choose the generation of the pipette:
 Generation 2 for pipettes with firmware \geq V 3.x.x and serial number 6xxxxx
 Generation 3 for pipettes with firmware \geq V 4.x.x and serial number 7xxxxx

- 4 Check applicable boxes :
 a.) VOYAGER pipette. Also choose the number of channels.
 b.) A program for ASSIST or ASSIST PLUS.

- 5 Add, Remove or Copy program steps. You can change the order of steps using “move up” or “move down”.

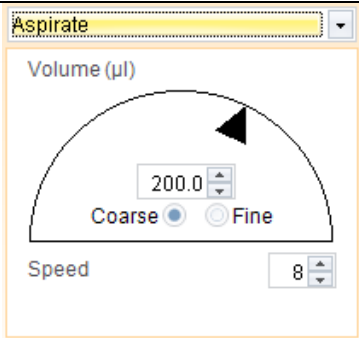
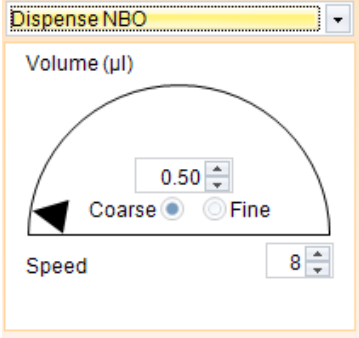
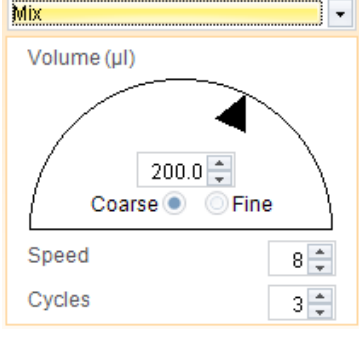
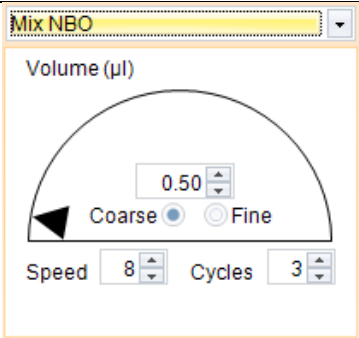
- 6 Select a programming step from the “Select action” drop down menu and enter the required parameters.

- 7 The green bar shows the amount of liquid in the tip up to and including the selected step.

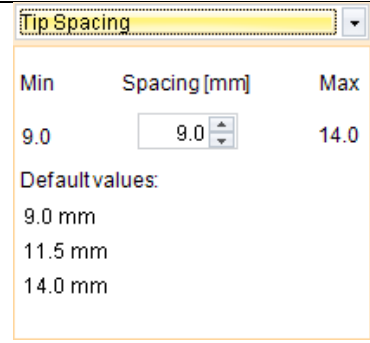
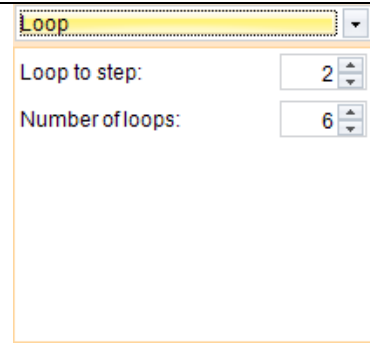
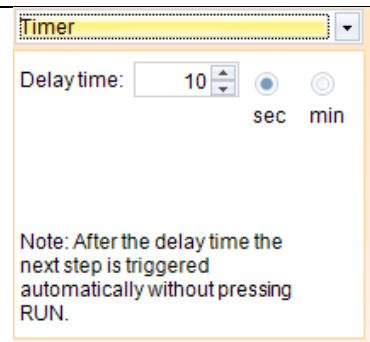
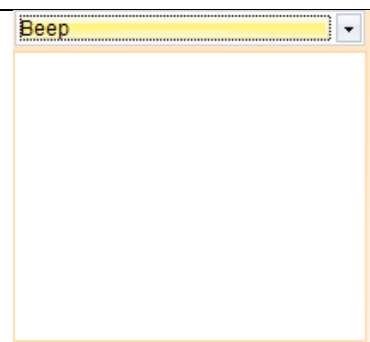
- 8 Click “Save” to finish and save the program.

- 9 Shows the date when the program was last modified.

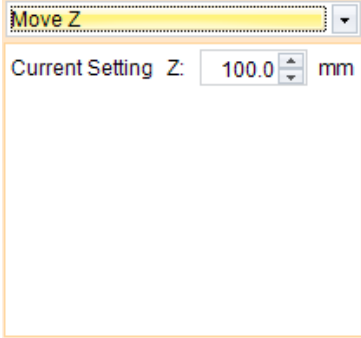
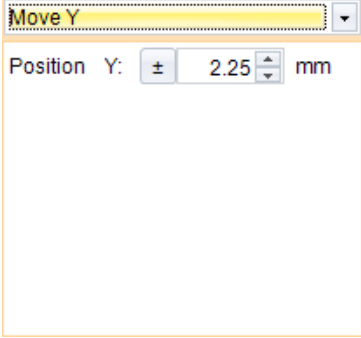
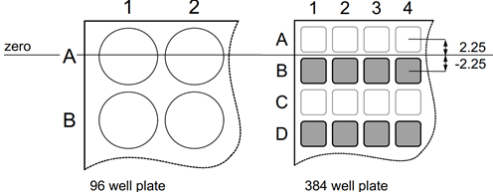
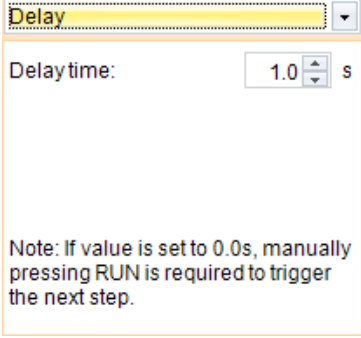
5.2.4 List of available program steps

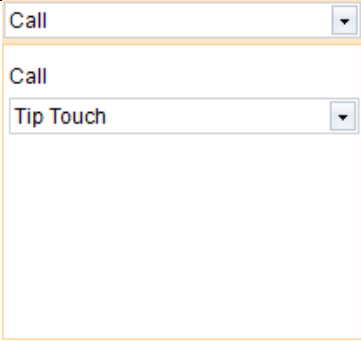
Programming step	Description
Aspirate and Dispense	
	<p>Use the dial to change the volume. To increase the volume in smaller increments, select “fine”. Alternatively, you can enter the volume directly.</p> <p>Use the arrow keys to change the aspiration/dispense speed (1-10) or enter the number directly.</p> <p>The <i>Dispense</i> step includes a Blowout and Blowin.</p>
Dispense NBO (No Blowout)	
	<p>Sets the volume and speed for a dispense without blowout.</p> <p>Residual liquid may remain in the tip, resulting in inaccurate and imprecise liquid delivery. Select this step only if introduction of air into the sample must be prevented and accuracy and precision is not priority.</p>
Mix	
	<p>Selects the mixing volume by adjusting the dial or enter the volume directly.</p> <p>You can also change the mixing speed and the number of mixing cycles.</p> <p>The <i>Mix</i> step includes a Blowout and Blowin.</p>
Mix NBO (No Blowout)	
	<p>Sets the mixing volume and speed without a blowout after the dispense.</p> <p>Residual liquid may remain in the tip, resulting in inaccurate and imprecise liquid delivery. Select this step only if introduction of air into the sample must be prevented and accuracy and precision is not priority.</p>

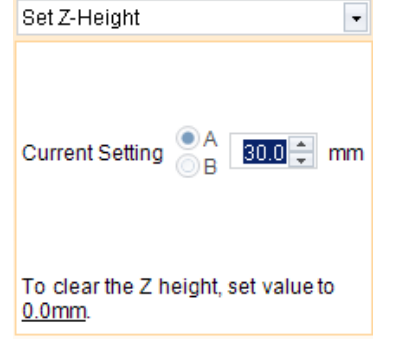
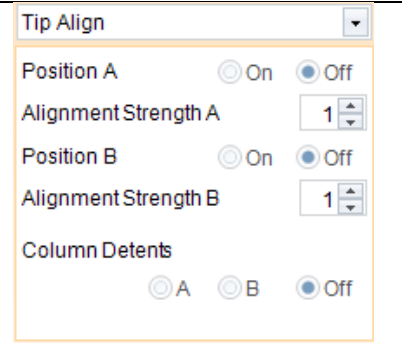
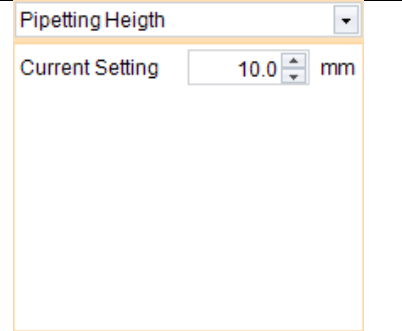
<h3>Purge</h3>	
	<p>Empties the tip, regardless of the amount of liquid in the tip.</p> <p>The <i>Purge</i> step includes a Blowout and Blowin.</p>
<h3>Prompt</h3>	
	<p>The <i>Prompt</i> step will display a message during a pipetting protocol before continuing with the next step.</p> <p>Three lines with a total of 30 characters are available.</p>
<h3>Blowout</h3>	
	<p>Performs a Blowout. A Blowout needs to be performed after the last dispense to expel residual liquid.</p> <p>Note: When using a standard <i>Dispense</i>, <i>Mix</i> or <i>Purge</i>, Blowout and Blowin are performed automatically to empty the tips and do not need to be programmed.</p>
<h3>Blowin</h3>	
	<p>If a Blowout step was added, it needs to be followed directly with a Blowin. It brings the piston(s) back to the home position. Make sure to remove the tips from the liquid before starting the Blowin.</p>

Tip Spacing (VOYAGER pipette only)							
 <p>Tip Spacing</p> <table border="1"> <thead> <tr> <th>Min</th> <th>Spacing [mm]</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>9.0</td> <td>9.0</td> <td>14.0</td> </tr> </tbody> </table> <p>Default values: 9.0 mm 11.5 mm 14.0 mm</p>	Min	Spacing [mm]	Max	9.0	9.0	14.0	<p>Allows changing of the tip spacing.</p> <p>The maximum and minimum width of the spacing depends on the number of channels and the nominal volume of the pipette.</p>
Min	Spacing [mm]	Max					
9.0	9.0	14.0					
Loop							
 <p>Loop</p> <p>Loop to step: 2</p> <p>Number of loops: 6</p>	<p>A loop repeats the steps between the selected step and the loop command.</p> <p>E.g. if the program reaches the loop step, it goes back to step 2 and repeats the steps until there 12 times.</p> <p>The number of steps in a program can often be shortened by adding a loop.</p>						
Timer							
 <p>Timer</p> <p>Delaytime: 10 sec min</p> <p>Note: After the delay time the next step is triggered automatically without pressing RUN.</p>	<p>Sets a timer from 0 s to 60 min. When the countdown is finished, the next step is performed automatically.</p> <p>If under Preferences - Sounds the option Messages is set to "On" a beep tone sounds.</p>						
Beep							
 <p>Beep</p>	<p>Sets a beep.</p> <p>The sound is only active, if under Preferences – Sounds the option Messages is set to "On".</p>						

Additional steps available in ASSIST and ASSIST PLUS custom programs	
Aspirate and Dispense with tracking function	
	<p>Defines the aspiration and dispense volume.</p> <p>The “Tracking”-Function enables a constant tip immersion depth by following the liquid level. The liquid tracking is based on the tracking distance (in millimeters) defined by the user. During aspiration the pipette moves the set distance down and during dispensing it moves up.</p>
Mix with tracking function	
	<p>Selects mixing volume, speed and cycles.</p> <p>The “Tracking”-Function enables a constant tip immersion depth by following the liquid level. The liquid tracking is based on the tracking distance (in millimeters) defined by the user. During aspiration the pipette moves the set distance down and during dispensing it moves up.</p>
Move (X,Z)	
	<p>The plate or pipetting arm moves to a desired position in X and Z direction, saved as “Current Setting”.</p> <p>Fill in the values if you know them. If the correct values are unknown, they have to be edited later on the instrument itself:</p> <ul style="list-style-type: none"> - Disconnect from VIALINK - Mount pipette on ASSIST or ASSIST PLUS and connect via ComModule. - Choose the program and edit the Move (X,Z) step to teach the correct values. <p>Setting up the program in the program organizer is easier as this allows live teaching of positions. See 5.2.5.</p>
Move X	
	<p>The plate or pipetting unit travels the set distance in X-direction relative to the current position.</p> <p>To pipette into the left direction, set a negative value. To pipette into the right direction, set a positive value.</p>

<p>Move Z</p> 	<p>The pipette moves to the selected Z-Height.</p> <p>Fill in the values if you know them. If the correct values are unknown, they have to be edited later on the instrument itself:</p> <ul style="list-style-type: none"> - Disconnect from VIALINK - Mount pipette on ASSIST or ASSIST PLUS and connect via ComModule. - Choose the program and edit the Move Z step to teach the correct values. <p>Setting up the program in the program organizer is easier as this allows live teaching of positions. See 5.2.5.</p>
<p>Move Y (only ASSIST PLUS)</p> 	<p>The pipette moves the defined distance in Y-direction.</p> <p>Example for a transfer between a 96 well plate and 384 well plate using an 8 Channel pipette:</p> <p>Move Y: -2.25 / 2.25</p> 
<p>Blowout / Blowin</p>	<p>After the last <i>Dispense</i> step of an ASSIST or ASSIST PLUS program, the Blowout and Blowin need to be programmed.</p> <p>After a Blowout a Blowin must follow at some point. It does not have to follow immediately and can have steps in between. E.g. after the Blowout a move step can be programmed to move the tips out of the liquid and is then followed by the Blowin.</p> <p>Note: When using <i>Purge</i> to empty the tips, a Blowout and Blowin are performed automatically and do not need to be programmed.</p>
<p>Delay</p>  <p>Note: If value is set to 0.0s, manually pressing RUN is required to trigger the next step.</p>	<p>The program pauses for the set time before proceeding to the next step.</p> <p>Setting a value of “0.0” seconds requires the RUN button to be pressed to continue.</p>
<p>Call</p>	

	<p>This step calls another custom program resulting in a program inside a program.</p> <p>It can be used to shorten custom programs with a set of steps that occur repeatedly in the program. An example would be the tip touch after a dispense was made.</p> <p>Example: ... Dispense x µl Call: Tip Touch Move X 9 mm ...</p>
<p>Tip Load and Tip Eject (ASSIST PLUS only)</p>	
	<p>Automatically loads tips from the tip rack and automatically ejects tips into the tip waste bin. Coordinates for these 2 positions do not have to be programmed.</p>

Additional steps available for MINI 96, VIAFLO 96 and VIAFLO 384 custom programs	
Set Z-Height (only VIAFLO 96 and VIAFLO 384)	
	<p>This will set a minimal Z-Height that limits vertical movement to that height. The Z-Height is activated when this step is reached in the pipetting program.</p> <p>Choose on which position the Z-Height should be active and set the desired height. Setting the height value to 0.0 mm will deactivate it.</p>
Tip Align (only VIAFLO 96 and VIAFLO 384)	
	<p>Activates tip align for the selected position. Tip align is an active positioning help to guide the pipette tips into the microplate wells.</p> <p>Choose on which position Tip Align should be active. Both positions can be activated/deactivated at the same time.</p> <p>For serial dilutions, Column Detents can be activated. Choose the position on which the target plate is.</p> <p>Then select the strength of the tip alignment: 1=weak, 2=moderate, 3=strong.</p>
Pipetting Height (only MINI 96)	
	<p>This will set a minimal Pipetting Height that limits vertical movement to that height. The Pipetting Height must be activated by pressing the RUN button when this step is reached in the pipetting program.</p>

5.2.5 Position teaching in the program organizer

- Ensure you have an active connection to the instrument as described in section 4.
- In the program organizer double click on the new program and add a “Move” step.
- ASSIST and ASSIST PLUS: Insert a pipette with attached GripTips into the pipette holder. Move the pipette on the ASSIST or ASSIST PLUS to the desired position using the arrow keys on the ASSIST or ASSIST PLUS instrument.
- VIAFLO 96 and VIAFLO 384: Move the pipetting head into position.
- “Actual Position” (1) shows the current coordinates.
- Clicking the blue arrow (2) applies these coordinates. “Current Setting” (3) are the coordinates which will be used by the program.

Volume range: 1250µl

Program name: VARIASPIRATE

Extended volume

Assist

Generation 2

Program steps

No.	Action	Summary
1	Move (X,Z)	X: 81.5mm Z: 56.5mm
2	Aspirate	100µl / Track. 0.0mm
3	Move Z	Z: 70.0mm
4	Move X	9.0mm
5	Move Z	Z: 56.5mm
6	Aspirate	150µl / Track. 0.0mm
7	Move Z	Z: 70.0mm
8	Move X	9.0mm
9	Move Z	Z: 56.5mm
10	Aspirate	200µl / Track. 0.0mm
11	Move Z	Z: 70.0mm
12	Move X	9.0mm
13	Move Z	Z: 56.5mm
14	Aspirate	250µl / Track. 0.0mm

Move (X,Z)

3 Current Setting X: 81.5 mm Z: 56.5 mm

2 ↑

1 Actual Position X: 50.2 mm Z: 105.6 mm

Moves to the selected position (X/Z-Position).

Total liquid volume up to and including this step.

0ul

5.2.6 Creating an Automatic Mode program for VIAFLO 96 and VIAFLO 384

The Automatic Mode is a special mode for VIAFLO 96 and VIAFLO 384 which performs a pipetting protocol automatically.

To create an Automatic Mode program, connect your VIAFLO 96 and VIAFLO 384 with VIALINK, go to the “Program organizer”, create a new program and select “Automatic Mode” (1).

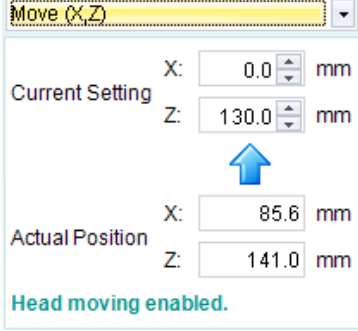
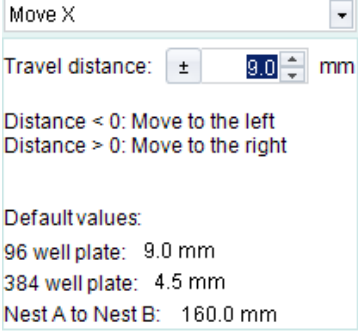
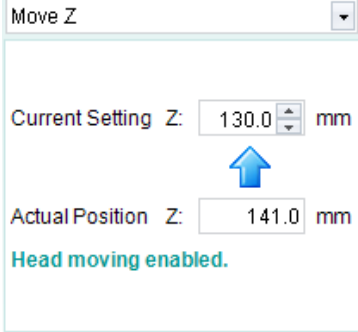
Volume: 1250µl

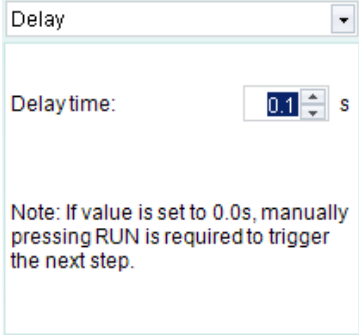

Program name: AUTOMATIC

Extended volume

1 Automatic Mode

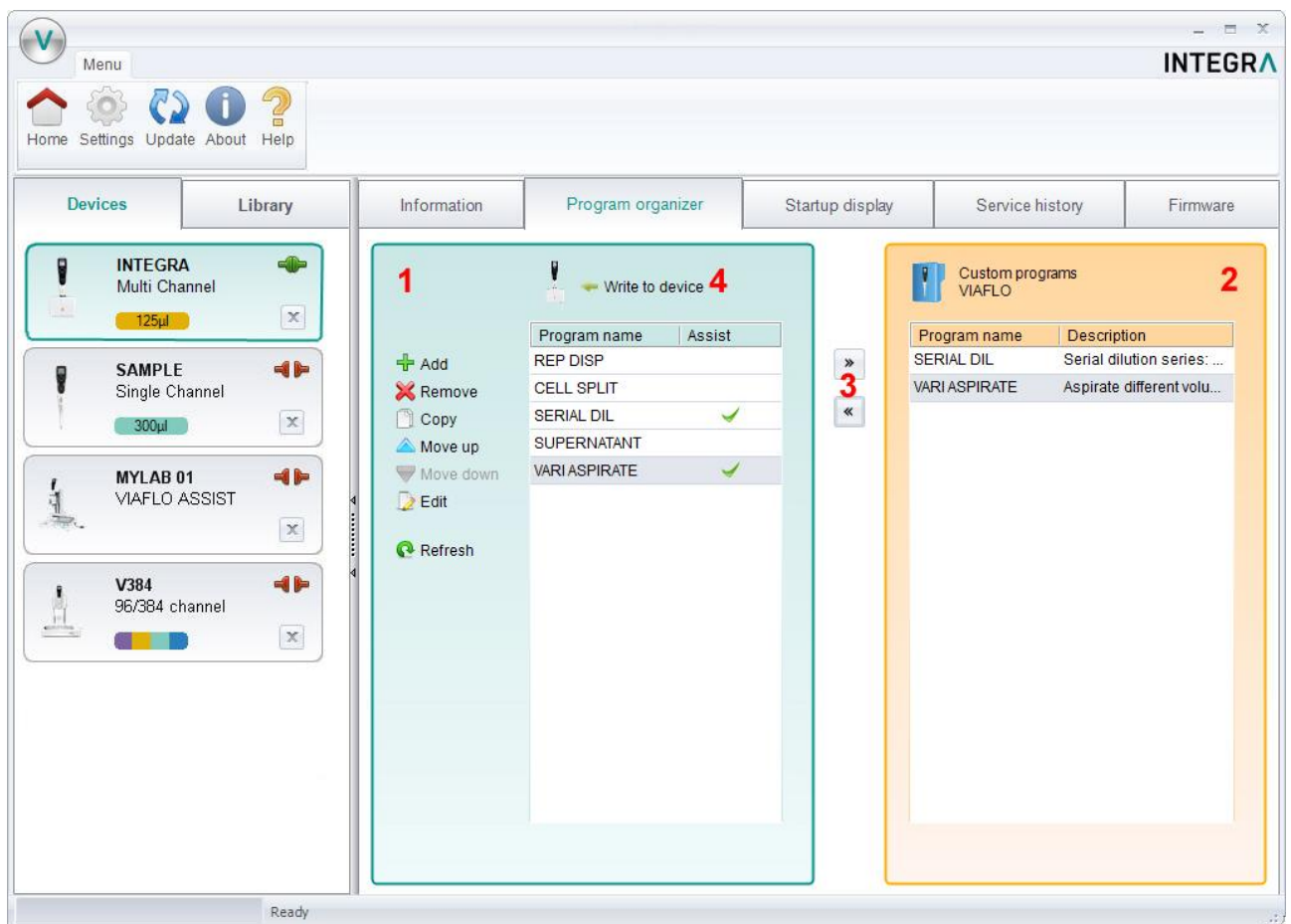
- Automatic Mode specific programming steps:

Programming step	Description
<p>Move(X/Z)</p> 	<p>The pipetting unit moves to a desired position in X and Z direction, saved as “Current Setting”.</p> <p>Teach the position by moving the pipetting unit to the desired position and then clicking the blue arrow.</p>
<p>Move X</p> 	<p>The pipetting unit travels the set distance in X-direction relative to the current position.</p> <p>Setting a negative value moves the unit to the left, setting a positive value moves the unit to the right.</p>
<p>Move Z</p> 	<p>The pipetting unit moves to the selected Z-Height.</p> <p>Teach the Z-Height by moving the pipetting unit to the desired height and clicking the blue arrow.</p> <p>The value of “Current Setting” will be used by the program.</p>
<p>Blowout / Blowin</p>	<p>After the last <i>Dispense</i> step of an automatic program, the Blowout and Blowin need to be programmed.</p> <p>After a Blowout a Blowin has to follow at some point. It does not have to follow immediately and can have steps in between. E.g. after the Blowout a move step can be programmed to move the tips out of the liquid and is then followed by the Blowin.</p> <p>Note: When using “Purge” to empty the tips, a Blowout and Blowin are performed automatically and do not need to be programmed.</p>

<p>Delay</p> 	<p>A delay is a pause between the last and the next step.</p> <p>If it is set to 0.0 s, pressing the run button is required to trigger the next step.</p>
<p>Tip change</p> 	<p>Allows to change the tips during an automation program.</p> <p>The program stops and prompts you to change the tips. Tip ejection and loading is initiated by the user.</p>

- The VIAFLO 96 and VIAFLO 384 library of VIALINK includes examples of automatic programs. Parameters can easily be adjusted to your protocol in the program organizer of VIALINK.

5.3 Uploading new custom programs to the pipette



- 1** Program organizer: Shows programs that will be transferred to the pipette.
- 2** Custom program library: Shows custom programs from the library on your computer. Only programs that are compatible with the connected pipette are displayed. In this case only programs that work with a 125 µl handheld pipette are shown.

3 Use the arrow keys to copy the selected program to the program organizer or the library.

4 Click “Write to device” to write all programs from the program organizer to the pipette.

- Choose a program from the library (2).
- Copy it to the program organizer (1) by pressing the arrow key (3).
- If you like, you can edit the programs also directly in the program organizer without changing them in the library on your computer.
- Note: To create/edit programs in the library, select the “Library” tab.
- Click “write to device” (4) to confirm any changes you made and save it to the pipette. Otherwise the changes will not be applied to the pipette. The program organizer reflects a temporary image of the pipette content.
- Do not disconnect the pipette until the transfer is completed. Check the status bar.

5.4 Uploading custom pictures

- Two custom pictures can be defined for each VIAFLO/VOYAGER pipette. Custom pictures are not available for VIAFLO 96 and VIAFLO 384.
- To upload a new picture, go to the “Startup display” tab.
- Select the desired picture and use the arrow keys to copy it to the pipette organizer (green).
- Click “write to pipette” to upload the picture to the pipette.
- You can download a picture from the pipette into your library by clicking “read from pipette” and use the arrow key to copy it into the library.
- To actually set the startup screen on your pipette, go to the “Toolbox” -> “Preferences” -> “Display” -> “Start up Screen”. Scroll down to “Custom 1” or “Custom 2”. By clicking “view” you can preview the picture and to select it click “save”.

5.5 Service history

- The service history allows you to save information about maintenance of the pipette.
- Go to the “Service history” tab and click “New entry” to add a new entry. Enter the text into the pipette screen in VIALINK. Click “Write to pipette” to save it. After writing it to the pipette, an entry cannot be deleted. It is permanent to ensure an authentic service history. The option to delete a new entry is only available before saving it to the pipette.
- Some entries, such as firmware updates or change of calibration factors, are created automatically.

5.6 Updating firmware

Firmware updates can be installed on your devices. This adds improvements and new features to the firmware. To install a firmware, update the Programming (USB) Stand must be used.

- ➔ Please read first the “Software and firmware update” history found in the Update menu tab.

5.6.1 VIAFLO/VOYAGER and D-ONE electronic pipettes

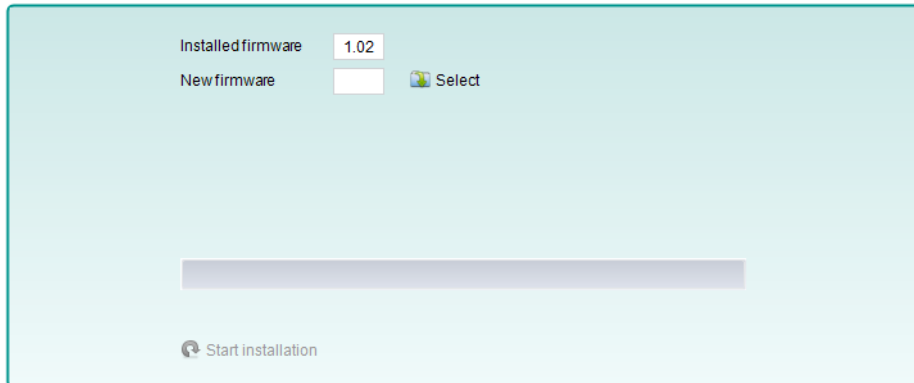
- Go to the “Firmware” tab and click “Select”.
- Choose the newest firmware file “Firmware_VIAFLO_Pipette_Vxx_xx.vdl” or “Firmware_VOYAGER_Pipette_Vxx_xx.vdl” or “Firmware_D-ONE_Pipetting_Module_Vxx_xx.vdl”
- Click “Start installation”
- Follow the instructions on the screen.

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- Note:
Firmware updates are not possible in “ComModule” and “Via ASSIST (PLUS)” communication mode.

5.6.2 MINI 96

- Go to the “Firmware” tab.



- Click "Select" and choose the corresponding firmware file "Firmware_MINI_96_Vxx_xx.vdl"
- Click “Start installation”
- Follow the instructions on the screen.

5.6.3 VIAFLO 96 and VIAFLO 384

- Go to the “Firmware” tab and select either “Control unit” or “Base unit” to update. If a new firmware is available for both, update the Base unit first!



- Click “Select” and choose the corresponding firmware files or
"Firmware_VIAFLO_96_384_Control_Unit_Vxx_xx.vdl"
"Firmware_VIAFLO_96_384_Base_Unit_Vxx_xx.vdl"
- Click “Start installation” to begin.
- Carefully follow the VIALINK instructions given on the screen.
- Then repeat the procedure and update the Control Unit.

5.6.4 ASSIST and ASSIST PLUS

- Go to the “Firmware” tab and click “Select”.
- Choose the firmware file “Firmware_VIAFLO_ASSIST_Vxx_xx.vdl” or
“Firmware_ASSIST_PLUS_Vxx_xx.vdl”.
- Click “Start installation”.
- Follow the instructions on the screen.

5.6.5 MAG and HEATMAG

- Go to the “Firmware” tab and click “Select”.
- Choose the firmware file “Firmware_MAG_Modules_Vxx_xx.vdl”
- Click “Start installation”.
- Follow the instructions on the screen.

6 Settings

The Settings menu allows you to specify which COM ports VIALINK is using.



Available communication ports:

- COM4 USB Serial Port

Interface language:

- English
- Deutsch
- Français
- Italiano
- Español

Service functions:

- Not visible
- Visible

Service code:

 Refresh

VIALINK will use the selected ports.

VIALINK will check the selected COM ports if a Programming Stand or instrument (MINI 96, VIAFLO 96, VIAFLO 384, ASSIST or ASSIST PLUS) is connected.

If the connection between a pipette and VIALINK cannot be established (make sure the pipette is in communication mode), click the “Refresh” button on the “Settings” menu. This might be necessary if the Programming Stand, MINI 96, VIAFLO 96 and VIAFLO 384 have been connected to the computer when VIALINK was already running.

Options under “Service functions” are intended for service personnel only and require a password.

7 Trouble Shooting

Topic	Issue	Remedy
Connection between pipette and computer	I can't get a connection between pipette and VIALINK.	<ul style="list-style-type: none"> • Make sure the pipette is in communication mode (see chapter 4). • Make sure the Programming Stand or device is connected to the computer. • Try to refresh the COM ports (see section 6). • ComModule: The Pipette Communication Module and PC need to be paired if connected for the first time. Refer to Windows Help to learn how to pair Bluetooth devices. The passcode 12345 may be required. • Make sure the drivers for the Programming Stand, MINI 96, VIAFLO 96, VIAFLO 384, ASSIST, ASSIST PLUS or MAG modules have been installed correctly. While the Programming Stand, MINI 96 or VIAFLO 96 is connected, go to your System Settings -> Device Manager. Check under Ports (COM & LPT) if there is an entry "USB Serial Port (COM X)". If there isn't, reinstall the drivers manually.
Custom programs	I'm in the program organizer and can't edit my programs in the library.	Programs in the library cannot be edited here. Exit the program organizer and select the Library tab. You can however copy a program from the library to the program organizer and edit the program in the organizer. This will not affect the original program in the Library.
	VIALINK does not read the current position for movement steps (Move (X,Z) and Move Z).	To use live teaching of positions you need to create the custom program in the program organizer. See 5.2.5.
Start Up Pictures	I've uploaded a new start up picture, but the pipette does not show it on start up.	You need to activate the desired start up picture, see section 5.4.
Service History	I can't delete my entry.	This is on purpose. Once written onto the pipette, the entry cannot be deleted.