

1 Short Manual



WARNING

Before initial operation check the correct operating voltage is set on the voltage selection switch on the underside of the device. Do not open the housing! Danger of electric shock!



CAUTION

The sample block and the heated lid can reach high temperatures during operation. Both the sample block and the heated lid can burn you. The samples are heated up quickly and may come to an explosive boil. Wear goggles when handling hot samples. Make sure that the lid is closed securely before starting the program!



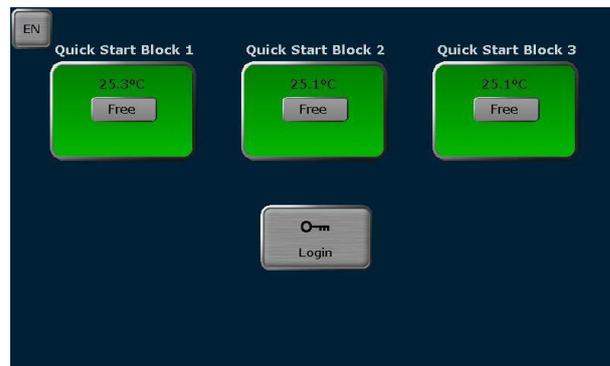
NOTICE

The use of oil between samples and sample block is not necessary. If you wish to use oil, never use silicone oil. Use mineral oil. Ensure that the ventilation slits are clear.

Important: Release the lid wheel before opening the lid! Adjust the lid wheel for every individual run!

Log in

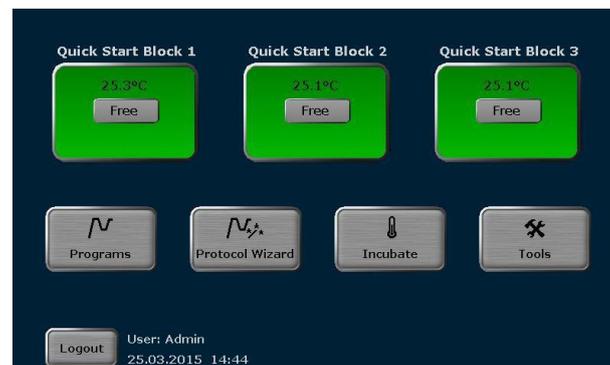
After the Biometra TRIO has passed the power-on self-test the login screen is displayed:



- Press [LOGIN] to log in as existing user
- Press [QUICK START] for the non-user specific quick start of programs
- Press [EN/DE/CN] to set the login screen language

Home Screen

After log in the Biometra TRIO home screen opens:



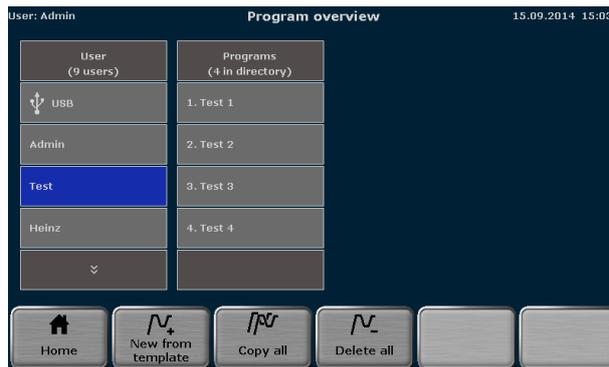
- Press [QUICK START] for the user specific quick start of programs
- Press [PROGRAMS] to edit, save, copy or run programs

- Press [INCUBATE] to incubate the sample block at a constant temperature
- Press [TOOLS] to access the system settings, user management, documentation, backup tool or self-test functions
- Press [LOGOUT] to log out

Edit, save and copy programs

Important note: It depends on your rights settings if you are allowed to create, delete, save, copy, start and stop programs. If you do not have a specific right you will not have access to the corresponding tools. Please ask your administrator or check your rights settings if you are missing a button or function.

- Press [PROGRAMS] in the Biometra TRIO home screen. The program overview screen opens:



- To edit a program template press [NEW FROM TEMPLATE], select a template and press [OPEN TEMPLATE].
- To edit a stored program select a user directory, select a program and press [EDIT].

The Biometra TRIO programming screen opens. Use the following buttons to switch between the different programming modes:

Graphical mode



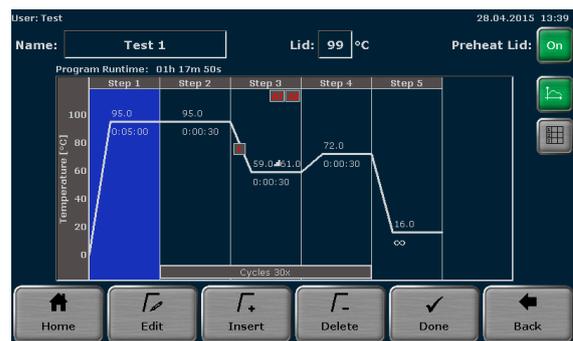
Spreadsheet mode



Spreadsheet programming screen



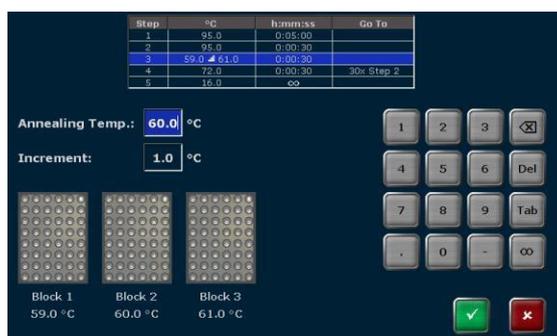
Graphical programming screen



- Define the program name. Touch the input box "NAME" and enter a program name using the Biometra TRIO keyboard.
- Define the heated lid status and temperature. Touch the input box "LID" and switch the heated lid on or off. If the heated lid is switched on enter a temperature between 30 °C and 110 °C.
- To switch heated lid preheating mode on or off press the corresponding button.
- Select a program step and press [EDIT]. The edit step screen opens:



- Use the cursor keys at the top of the screen to switch between program steps. The number of the currently activated step is displayed.
- Touch the input box "TEMPERATURE" and enter a temperature (°C).
- Touch the input box "HOLDTIME" and enter the time (H:MM:SS). To program a pause step press the button ∞.
- To program loop touch the input box "GOTO" and enter the step number the program shall go back to. Then touch the input box "CYCLES" and enter how often the loop will be repeated.
- To reduce or increase the annealing temperature from step to step within a loop press the button ΔT and set a negative or positive temperature increment.
- To increase or reduce the incubation time from step to step in a loop press the button Δt and set a time increment.
- To adjust the ramping rate press the button ΔR and enter any value between 0.1 °C and max.
- To define a Temperature Optimisation Step press button [TOS]. Enter the primer annealing temperature and define the temperature increment. The temperature for each sample block is displayed. Press the button ✓ to confirm the settings.

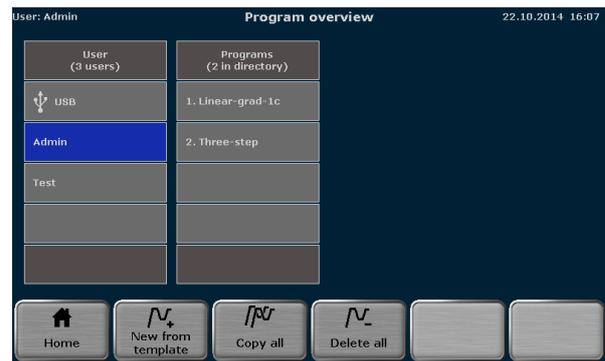


- To confirm all settings press the button ✓ in the edit step screen. The software leaves the edit step screen and shows the graphical or spreadsheet view.
- To insert a step select a program step in the programming screen and press [INSERT]. The edit step screen opens. Enter the desired parameters and confirm the settings by pressing the button ✓.
- To delete a step select a program step and press [DELETE]. In the security query confirm to delete the step by pressing the button ✓.
- When the parameters for all steps are entered confirm the settings by pressing the button [DONE] in the programming screen. The software opens the screen to copy and save programs. Please note that the program is not saved yet. To save the program select a user directory and a storage place, then press the button [SAVE].

Save program



Copy/Delete programs



- To copy programs press the button [PROGRAMS] in the Biometra TRIO home screen. To copy all programs located in a user directory select a user directory and press the button [COPY ALL]. To copy a single program select a user directory and a program and press the button [COPY]. Select a user directory, a storage place and press the button [SAVE].
- To delete all programs located in a user directory select a user directory, press the button [DELETE ALL] and confirm the security query. To delete a single program select a user directory and a program and press the button [DELETE]. Confirm the security query to delete the selected program.
- The Biometra TRIO thermal cycler stores the latest 5 edited or started programs for each user. For quick start of a program press the [QUICK START] button in the home screen. Select a program from the list and press [START].
- To start a program from a user directory press the button [PROGRAMS] in the home screen. In the next screen select a user directory and a program and press the [Start] button.
- After start the running program is shown in spreadsheet or graphical view. Use the same buttons as for the programming screen to switch between the different modes. The current step is highlighted in yellow.

Start, pause and stop programs

Spreadsheet view

Name	Estimated End	Remain. Time	Block Temp.	Lid	Step		
Test 1	13:52:30	01h 14m 16s	95.0°C	99.4°C	1/5		
Step	Block Temp. (°C)	Hold Time (h:mm:ss)	Go To	Cycles	ΔT(°C)	Δt(s)	ΔR(°C/s)
1	95.0	0:04:51	--	--	--	--	6.0
2	95.0	0:00:30	--	--	--	--	6.0
3	59.0	0:00:30	--	--	1.0	1	1.0
4	72.0	0:00:30	2	30	--	--	6.0
5	16.0	∞	--	--	--	--	6.0

Graphical view



- To pause the active program press the button [PAUSE]. The color of the highlighted step changes to blue and in the field "STEP" the message PAUSE is shown.
- To continue a paused program press the button [CONTINUE].
- To skip a step press the button [SKIP].
- To stop the active program press the button [STOP PROGRAM] button and confirm the security query. Note: Programs with a pause in the last step have to be stopped manually as well.
- In the home screen press [TOOLS], in the next screen the button [USER-MANAGEMENT]. Then use the checkboxes to switch the user management on or off.

Switch user management on or off (only administrator)