1   Quick reference guide

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 of the device unless you are authorized to do so. 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 to achieve an improved heat exchange. If you wish to use oil, never use silicone oil. Use mineral oil.

Ensure that the ventilation slits are clear. Insufficient ventilation may cause the device to overheat. Tip: Clean the air inlets on the underside of the device at regular intervals to ensure optimum airflow.

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

Login   After the initial self-test, the login screen is displayed:

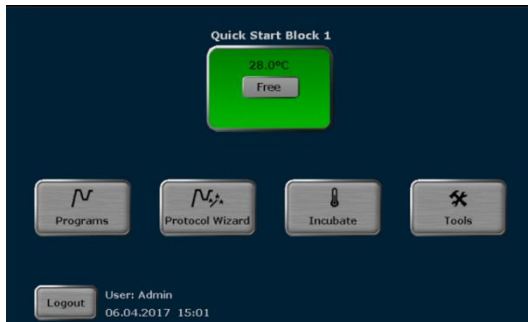Login screen for Biometra TAdvanced Mono   for Biometra TAdvanced Twin

- Press [LOGIN] to log in as an existing user.

- Press [QUICK START] for the non-user-specific quick start of programs.

- Press [EN/DE/CN] to change the language setting of the login screen.
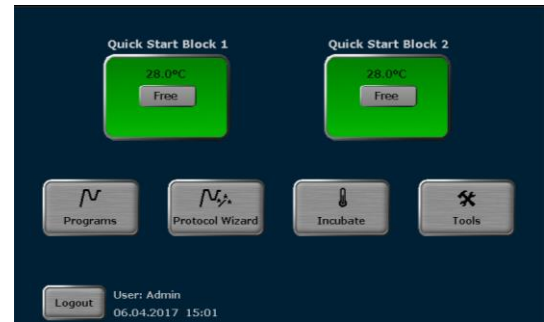
Home screen   After login the Biometra TAdvanced home screen opens.

- 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.
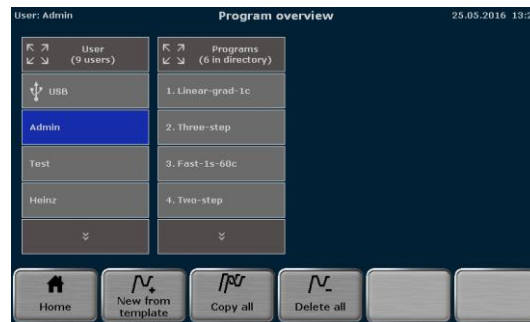
- Press [LOGOUT] to log out.

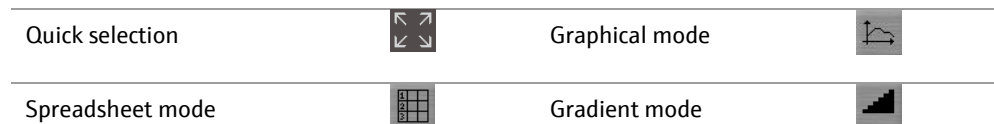Home screen for Biometra TAdvanced Mono   for Biometra TAdvanced Twin

Editing, saving and
copying programs

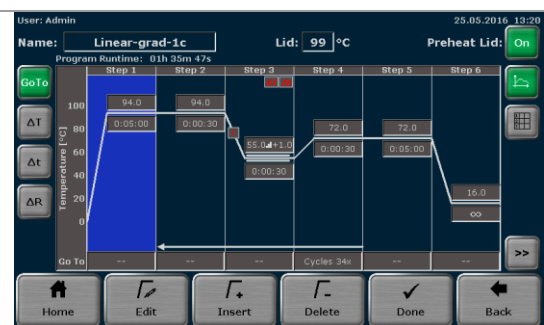■ Press [PROGRAMS] on the home screen to open the program overview:

■ To edit a template, press [NEW FROM TEMPLATE], select a template from the list and
  press [OPEN TEMPLATE].

■ To edit a stored program, select a user directory and a program and press [EDIT].

■ Alternatively, a user or a program can be selected via the quick selection.

The Biometra TAdvanced programming screen opens. Use the following buttons to
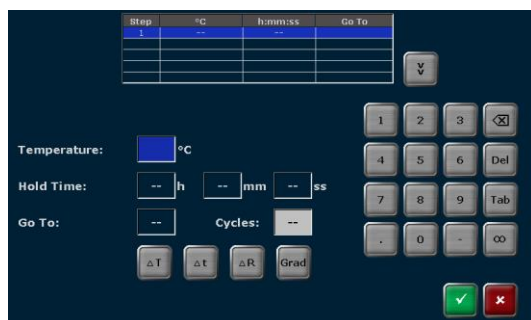toggle between the different programming modes:

Quick selection	⤢	Graphical mode	📈
Spreadsheet mode	▦	Gradient mode	▰

Spreadsheet programming screen   Graphical programming screen
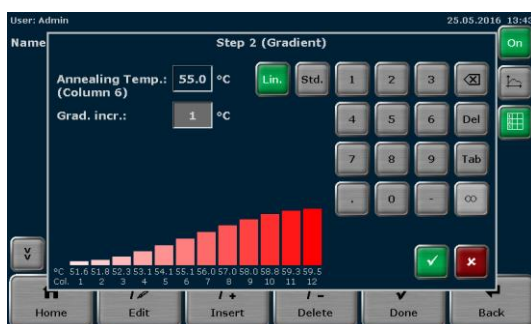
■ Enter a program name. To do this, touch the NAME input field and enter a name
  using the Biometra TAdvanced keyboard.

■ Define the status and the temperature of the heated lid. Touch the HEATED LID input
  field and switch the heated lid on or off. If the heated lid is switched on, enter a
  temperature between 30℃ and 110℃.

■ To switch the heated lid preheating on or off, press the corresponding button.

■ Select a program step and press [EDIT]. The screen for editing program steps opens:
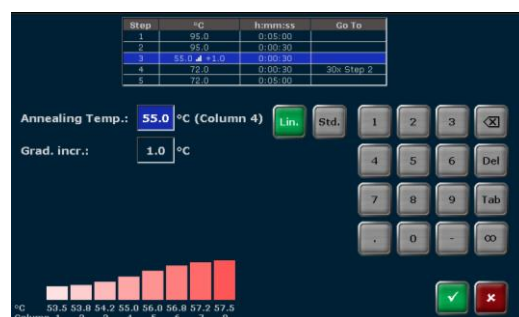
- Use the cursor keys above the keyboard to switch between program steps. The number of the currently activated step is displayed on a blue background in the table at the top of the screen.

- Touch the TEMPERATURE input field and enter a temperature [°C].

- Touch the HOLD TIME input field and enter a time. To program a pause step press ∞.

- To program a loop, touch the GO TO input field and enter the step number to which the program should return. Then touch the CYCLES input field and enter how often the loop should be repeated.

- To reduce or increase the annealing temperature from step to step within a loop, press ΔT and set a negative or positive temperature increment.

- To reduce or increase the hold time from step to step within a loop, press Δт and set a time increment.

- To adjust the heating rate, press ΔR and enter a value between 0.1 °C and max. You can accept the heating rate for all steps in the program by activating the [APPLY HEATING/COOLING RATE TO ALL STEPS] checkbox.

For gradient-capable devices only

- To program a gradient, press GRAD. On the next screen you can choose between standard [STD.] and linear gradient programming [LIN.]. For standard programming enter a temperature for both the first and last row in the sample block. For linear programming enter the primer annealing temperature and set a temperature increment. The gradient curve is displayed. Press ✓ to confirm your entries.
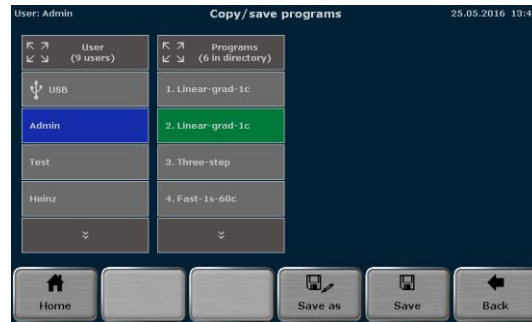

Programming of linear gradient at TAdvanced Mono   at TAdvanced Twin

- Press ✓ on the screen to accept the settings. The software leaves the screen and opens the spreadsheet or graphical program display.

- Alternatively, individual program parameters for a step can be edited. In the spreadsheet view press directly on the cell in the program table which you want to edit. In the graphical view press on the desired parameter edit field. Program options (loops, temperature and time increment, heating and cooling rate) must be activated using the button to the left of the graphical display.

- To insert a program step, select a step and press [INSERT]. In the next screen enter the desired parameters and confirm the settings by pressing ✓.
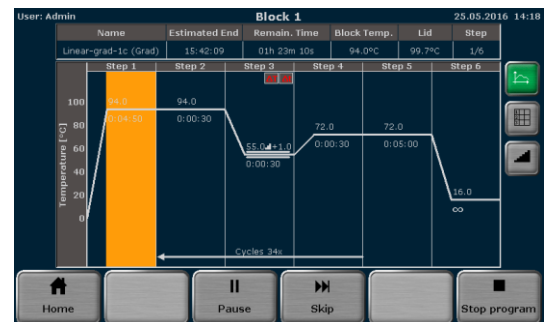
■ To delete a program step, select it and press [DELETE].

Incubation at 15 °C rather than 4 °C at the end of a run increases the device's life time.

■ When all the parameters for all steps have been entered, confirm the settings on the programming screen with [DONE].

■ To save the program, select a user directory and a storage location in the next screen. Then press [SAVE]. The program is now saved.

■ To copy programs, press [PROGRAMS] on the Biometra TAdvanced home screen.

■ To copy all programs located in a directory, select a directory and press [COPY ALL]. Select a directory to which the programs should be copied and press [SAVE].

■ To copy a single program, select a directory and a program and press [COPY]. Select a directory and a storage location and press [SAVE].

■ To delete all programs located in a directory, select it and press [DELETE ALL]. Confirm the confirmation prompt.

■ To delete a single program, select a directory and a program and press [DELETE]. Confirm the confirmation prompt.

Starting, stopping and pausing programs

■ The Biometra TAdvanced stores the latest 5 started or edited programs for each user. To quick start a program, press the [QUICK START] button on the Biometra TAdvanced home screen. Select a program from the list and press [START].

■ To start a program from a user directory, press [PROGRAMS] on the Biometra TAdvanced home screen. Then select a directory and a program and press [START]. After the start the current program is shown in a spreadsheet, graphical or gradient view. Use the same buttons as in the programming screen to switch between the different views. The active step is highlighted in yellow (see below).

■ To pause an active program, press [PAUSE]. The color of the highlighted step changes to blue and the message PAUSE is shown in the STEP field.

■ To continue a paused program, press [CONTINUE]. To skip a step, press [SKIP].

■ To stop an active program, press [STOP PROGRAM] and confirm the prompt. Programs with a pause in the last step have to be stopped manually as well.

Spreadsheet view

Graphical view