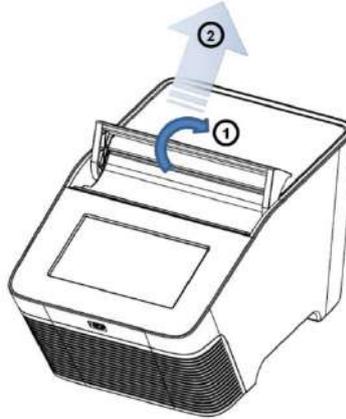# TurboCycler 2 Quick Operation Guide
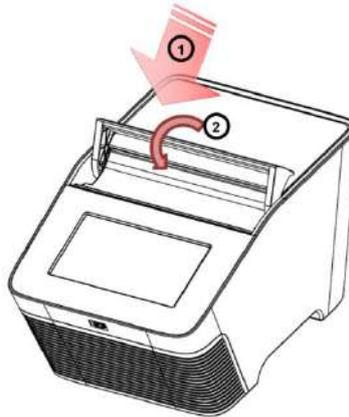
Scan the QR code on page 8 to download the Operation Manual.

Hardware operation

1. To open the lid, pull the handle upward and lift the lid backward to the upright position.


2. To close the lid, pull the lid downward and close the handle to the lock position.


3. Lid heater setting:

| PCR vessels	Compression mat	Lid heater temperature
Regular PCR plate, tube-strips and tubes	Not necessary. The 1 mm compression mat can be used to help maintaining the sealing integrity in case the PCR plate has any imperfection on the rim of the well.	105°C
Low profile PCR plate, tube-strips and tubes	The 5.2 mm compression mat must be used to ensure sufficient contact pressure from the heated lid	120°C

a. Instruction for applying the compression mat:

Compression mat

PCR plate

Sample block
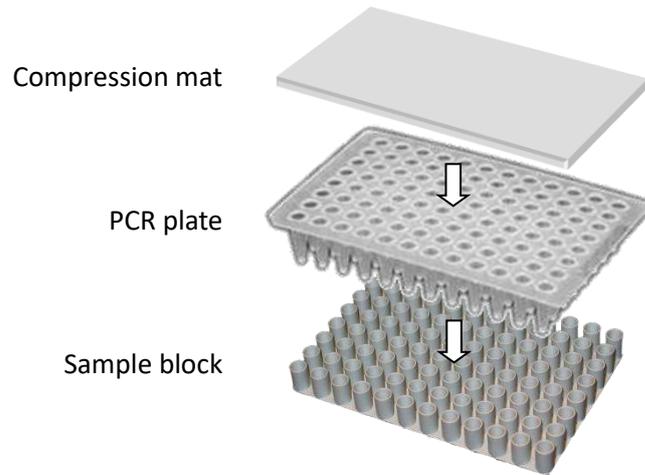
b. For detailed instructions on the lid heater setting, please refer to **section 3.4** of the TurboCycler 2 Operation Manual.

4. In order to prevent the deformation of the PCR vessels, and to ensure even distribution of the pressure from the lid, when PCR tubes or tube-strips are used, please load extra empty tubes on the 4 corners of the sample block. Always make sure that all the sample tubes/ tube–strips are distributed evenly on the sample block.
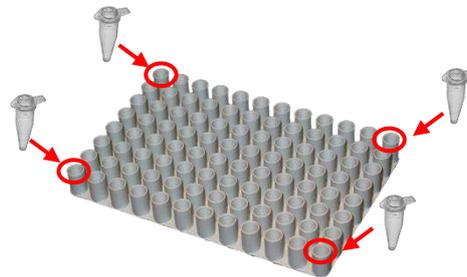
5. Ventilation air flow path:
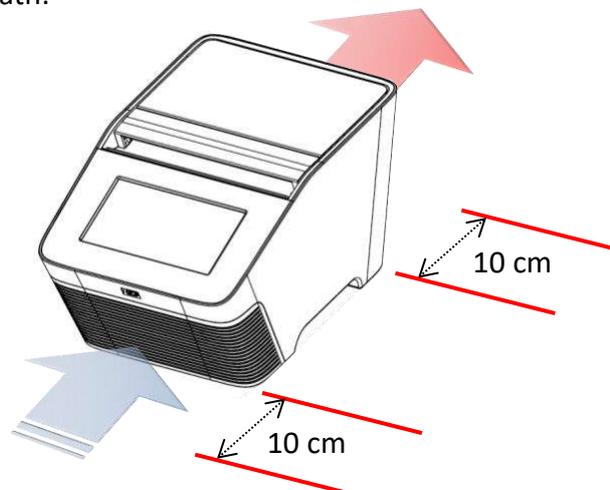
10 cm

10 cm

Please make sure there is no obstacle in the air flow path. At least 10 cm of space is required at the front and the back of the instrument.

Software operation

1. **Main Screen:** Tap on the "*TurboCycler*" title to log in.

Lab Name

Directory

Date and Time

Actual Lid and Block Temperature

Main function icons:	
	New Protocol For new protocol creation and editing
	Template Built-in protocol template
	Public Short cut to the Public folder
	User For user folder management
	System System setting
	Tools Built-in assistant tools
	History Protocol run history logbook
	Run Status Display the status of the running protocol

2. **User folder management:**
   a. On the main screen, tap on [icon] to enter the user folder management section.
   b. Tap on [+] to create a new user folder.

Input the folder name and password (optional). Tap the user icon to toggle to the icon you want to use for the new folder.

c. To modify an existing user folder, tap on the icon to select the folder. The selected folder's icon will be highlighted.

| Icons for user folder editing	
	Delete the selected folder
	Modify the name and password
	Open the folder
	Open the USB flash drive

3. **To create a new protocol:**

a. On the main screen, tap on to create a new protocol.

b. To select the **Stage / Step**, tap on the stage header or the step segment. The selected area will be highlighted.

4
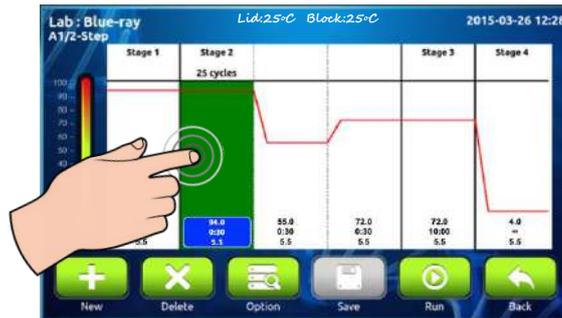
c.   Tap on [+] to duplicate the **Stage / Step**.

d.   Tap on [X] to delete the **Stage / Step**.

e.   Tap on [Stage 2 20 cycles] in the **Stage** header to modify the cycle number of the stage.

f.   Tap on [55.0 0:30 5.5] in the **Step** to modify the step temperature, time or ramp rate.
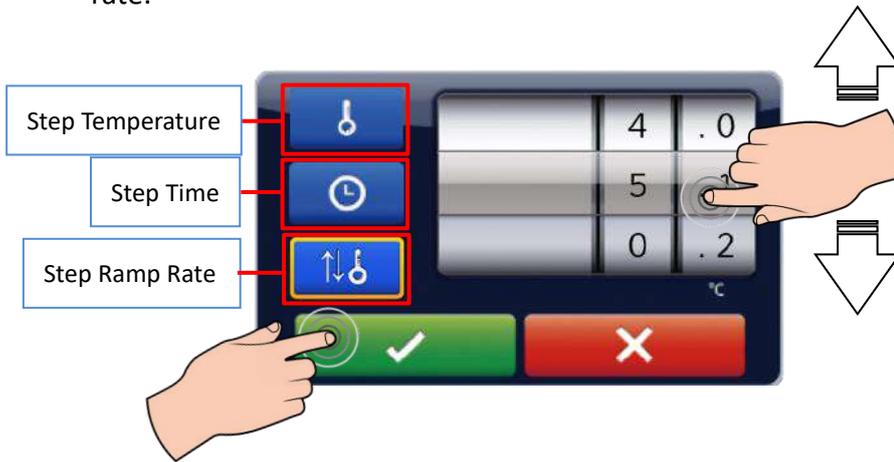
g.   Tap on [icon] to set the optional Gradient, Temperature increment/decrement per cycle or the Time increment/decrement per cycle for the selected step.
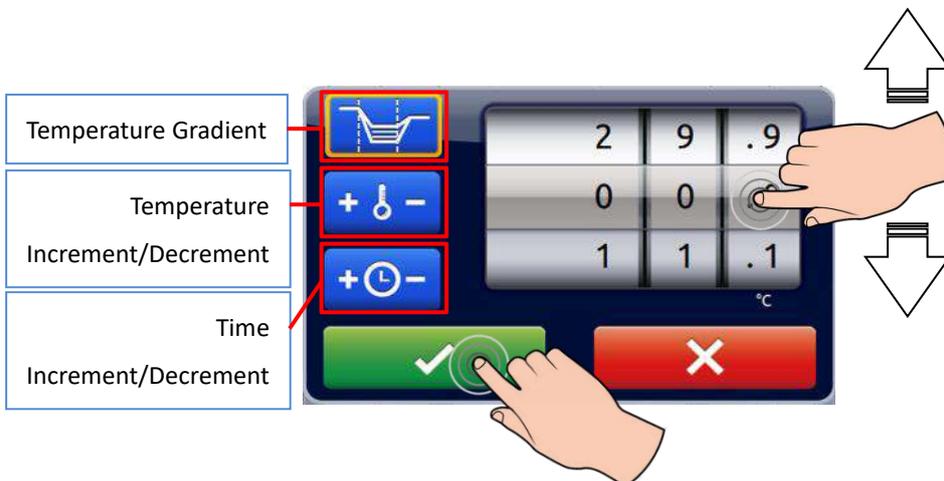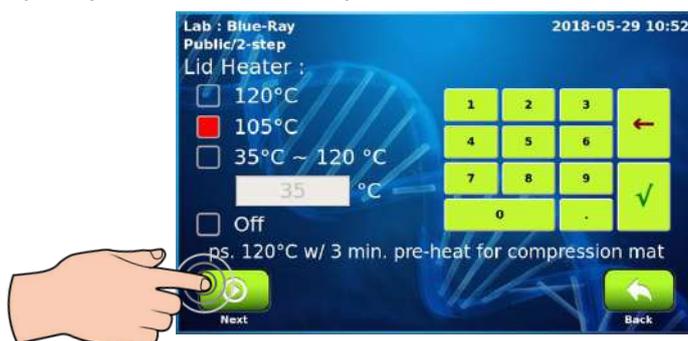
h. Tap on ⊟ to save the protocol. Input the protocol name and tap on "**OK**", then you'll be brought to the user folder selection screen. Tap on the user folder icon to select the folder, and then tap on ⊟ to save to the folder. Alternatively, you can tap on 🔳 to save the protocol to the USB flash drive.

4. To edit an existing protocol:

a. Please refer to the step c. in "**Section 2. User folder management**" to open the folder.

b. Tap to select the protocol.

Tap on 🔳 to open the protocol.

c. Follow the instructions of step b. to h. in "**Section 3. To create a new protocol**" to edit and save the protocol.

5. To run an existing protocol:

a. Follow the instructions of step a. and b. in "**Section 4. To edit an existing protocol**" to open the protocol.

b. Tap on ⊙ to initiate the run.

c. Specify the lid heater temperature.

d. Specify the mode you want to use to run the protocol. Key in the sample volume if you select the "**Sample Mode**". Tap on to start the run.
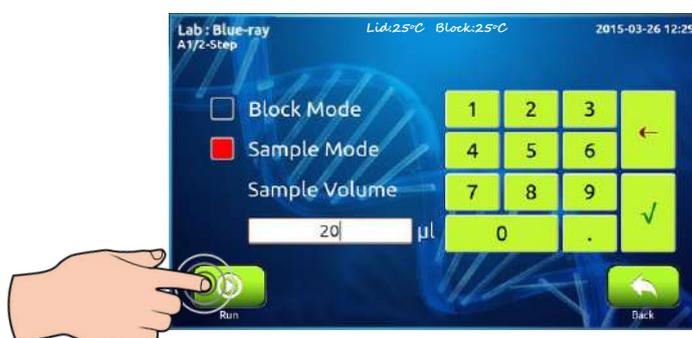
6. Tools:

Icon	Function	Description
	Tm Calculator	Calculate the Tm for the input primer
	Incubation	Use the TurboCycler as an incubator
	Copy Number Convertor	Convert the DNA concentration into copy number
	Mastermix Preparation Wizard	Calculate the volume of the reagents needed to make the mastermix
	Help	Display the quick operation guide

7. System:

Icon	Function	Description
	Brightness	Adjust the LCD screen brightness
	Beep Sound	Turn on/off the system buzzer
	Time & Date	Set the system time and date
	Wi-Fi	Change the Wi-Fi related setting
	Administration	System Administration
	Service Mode	Enter system service mode

Note:

1. The content of this document is subject to change without prior notice. Please visit Blue-Ray Biotech's website at www.blue-raybio.com for update information.

2. If you have any questions about the operation of the TurboCycler, please contact sales@blue-raybio.com for assistance.

3. Sacn the QR code to access the product website and the operation manual.

Product Website   Operation Manual

P/N: 406-TCBR01-20