





### **Main Menu and Controls**

Press the buttons on the front control panel to perform the functions shown in the diagram below.



### **Running a Protocol**

- 1. Press RUN.
- Navigate to a folder in the File library. Highlight and press ENTER to expand or collapse the folder.
- 3. Select a protocol, and press ENTER or RUN.



File library





#### **Creating or Editing a Protocol**

- 1. Select New Protocol (F4), or press the EDIT button and select a protocol.
- 2. Navigate to a desired field to highlight and edit a value.
- 3. If desired, choose to Insert a step (F1), Delete a step (F3), or add Options (F4).
- 4. When inserting a step, select TEMP (F1) for a temperature step, GRAD (F2) for a gradient step, or GOTO (F3) for a GOTO step.
- 5. Press RUN to run the protocol without saving, or select Done (F2) to select a folder location and save.



Graphical mode

Name				lol 📑	30	μl	Lid	105	°C
1 9	5.0	C for 0:30							
→ 2 55	5.0	C for 0:30							
3 7	2.0	C for 1:00							
- 4 G	ото	2,35	more	times					
5 73	2.0	C for 5:00							
6 13	2.0	CForever							
El	VD -								
Use the keypad to enter values and navigate Ext: 01:20:00 through the protocol steps.									
Insert		Done		D	elet	e		Optio	ns
T I I									

Text mode

## **Using the Protocol Autowriter**

The protocol autowriter wizard automatically suggests a cycling protocol with hot start, initial denaturation, annealing, and extension steps, based on parameters you input and standard PCR guidelines, and it can create a faster protocol for you.

1. Enter the primer annealing temperature (T<sub>a</sub>), amplicon length, and polymerase. To calculate the primer  $T_a$ , select the  $T_a$  calculator (F1).



2. Select the desired protocol speed: standard, fast, or ultrafast.



3. Save the suggested protocol. (Edits can also be made on this screen.)



# **Opening and Closing the Heated Lid**

### Opening the Lid

- 1. Turn the knob counterclockwise to raise the inner lid.
- 2. Raise the handle to the up position.
- 3. Push the handle toward the back of the instrument to unlatch the lid, then lift the handle up.

### Closing the Lid

- 1. Using the handle, push the lid down until it latches securely (see inset).
- 2. Lower the handle to the horizontal position.
- Turn the knob clockwise until the inner lid contacts the vessels, then add one-half turn for sealing tape or one-quarter turn for caps.







Purchase of this instrument conveys a limited non-transferable immunity from suit for the purchaser's own internal research and development and for use in applied fields other than Human In Vitro Diagnostics under one or more of U.S. Patents Nos. 5,656,493, 5,333,675, 5,475,610 (claims 1, 44, 158, 160–163 and 167 only), and 6,703,236 (claims 1–7 only), or corresponding claims in their non-U.S. counterparts, owned by Applera Corporation. No right is conveyed expressly, by implication or by estoppel under any other patent claim, such as claims to apparatus, reagents, kits, or methods such as 5' nuclease methods. Further information on purchasing licenses may be obtained by contacting the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA.

This product is covered by one or more of the following U.S. patents or their foreign counterparts owned by Eppendorf AG: U.S. Patent Nos. 6,767,512 and 7,074,367.



Bio-Rad Laboratories, Inc.

Life Science Group	Web site www.bio-rad.com USA 800 4BIORAD   Australia 61 02 9914 2800 Austra 01 877 89 01 Belgium 09 385 55 11   Brazil 55 21 3237 9400 Canada 905 364 3435 China 86 21 6426 0808   Czech Republic 420 241 430 532 Denmark 44 52 10 00   Finland 08 804 22 00 France 01 47 95 69 65 Germany 089 318 84 0   Greece 30 210 777 4396 Hong Kong 852 2789 3300 Hungary 36 1 455 8800 India 91 124 4029300 Israel 03 963 6050   Italy 39 02 216091 Japan 03 6361 7000 Korea 82 2 3473 4460 Mexico 52 55 488 7607 The Netherlands 0318 540666   New Zealand 0508 805 500 Norway 23 38 41 30 Poland 48 22 331 99 99 Portugal 351 21 472 7700 Russia 7 495 721 14 04 Singapore 65 6415 3188 South Africa 27 861 246 723 Spain 349 1590 5200 Swetzerland 061 717 95 55
	Taiwan 886 2 2578 7189 United Kingdom 020 8328 2000