

# Fluidigm® Stand-Alone Thermal Cycler Usage Quick Reference

PN 68000111 Rev. C

For more information see, *BioMark Digital PCR Analysis Software User Guide, PN 68000100*

## 1 Loading the Chip onto the Thermal Cycler

Remove the blue protective film from the bottom of the chip.

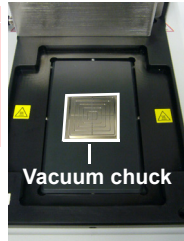
Open the thermal cycler cover and place the chip on the thermal cycler tray, making sure that the notched corner of the chip is aligned with **A1** on the tray.



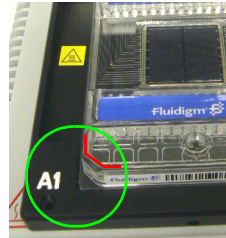
### WARNING! BURN HAZARD.



**AVOID TOUCHING THE VACUUM CHUCK UNTIL IT REACHES ROOM TEMPERATURE.**



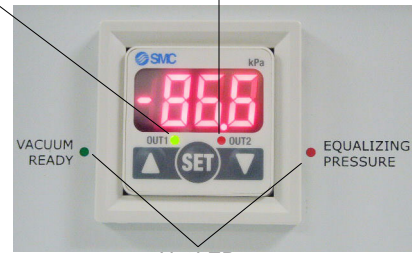
Vacuum chuck



Close the thermal cycler cover.

The **green** LED signals vacuum is ready

The **red** LED signals vacuum is equalizing pressure and is not ready



VACUUM READY

EQUALIZING PRESSURE

Not LEDs

## 2 Powering On the Thermal Cycler

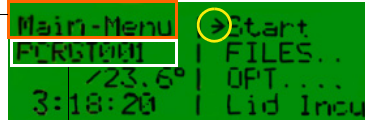
Press the switch on the vacuum station front panel to **VACUUM**.

The **red** LED stays on until the vacuum reaches approximately -80 kPa (~ 5 sec.) at which point it goes out and the **green** LED illuminates, and the thermal cycler powers on.


**NOTE** The thermal cycler does not receive power until the **green** LED is on (-80 kPa). If the green LED (Vacuum Ready) does not illuminate, see *Troubleshooting* on the next page.

**WARNING! DO NOT REMOVE CHIP UNTIL THE VACUUM IS OFF—NO LEDs ILLUMINATED. YOU MAY DAMAGE THE CHIP IF YOU REMOVE IT WHEN THE VACUUM IS ON.**



Once the thermal cycler starts, **MAIN-MENU** displays. If it does not display, press **EXIT** repeatedly until it does.

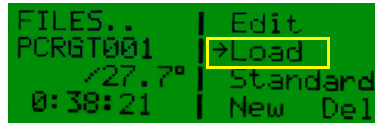


Arrow highlights selection (in yellow circle)

Press **START/STOP**  to start the program. The program name appears here. If this is the program you want to run, go to step 4.

## 3 Changing the Program

- Press  once to highlight **FILES**.
- Press **ENTER** to select **FILES**.
- Press  to navigate to **LOAD**.
- When **LOAD** is highlighted, press **ENTER**.
- Using the arrow buttons, navigate to the desired program.
- Press **ENTER** to load the program.
- Press **EXIT**.



Load is highlighted

## 4 Removing the Chip from the Thermal Cycler

When the program is done:

- Press the switch on the vacuum station front panel to **VENT**,
- Wait until the vacuum releases and the pressure gauge is near zero (no LEDs illuminated).
- Open the thermal cycler tray cover.
- Remove the chip from the thermal cycler tray.

# 5 Troubleshooting

## STOPPING THE PROGRAM

- To stop a program in progress:
- Press **START/STOP**.
  - Press **ENTER** to cancel the program.
  - Press the vacuum station switch on the front panel to **VENT**. Wait for until the vacuum releases and the pressure gauge is near zero (no LEDs illuminated).
  - Remove the chip from the thermal cycler tray.

## POWER INTERRUPTION

If the vacuum station front panel switch is pressed to **VENT**, or there is a power failure, when power is restored, the thermal cycler powers on. However, the behavior of the thermal cycler varies depending upon how long the power was off. Use the table below as a guide.

### If Power to the Thermal Cycler is off

#### LESS than 3 Minutes...

When power is restored, the thermal cycler display flashes *Restarting Program*, then, *restarted* (upper right) followed by, *Press any key* (lower left).

The program now restarts from the beginning of the step the program was performing when power/vacuum was lost. But, you must press any key to update the display.

## INSUFFICIENT VACUUM

- If the green LED does not illuminate within 20 seconds:
- Press the switch on the vacuum station front panel to **VENT**.
  - Wait until the pressure gauge reads < 1.0 before removing the chip.
  - Clean the bottom of the chip and the vacuum chuck with a **dry, non-abrasive lint-free cloth**.

### WARNING! BURN HAZARD.



**AVOID TOUCHING THE VACUUM CHUCK UNTIL IT REACHES ROOM TEMPERATURE.**

- Place the cleaned chip on the cleaned vacuum chuck and start at step 4.

### If Power to the Thermal Cycler is off

#### MORE than 3 Minutes...

When the power is restored, the thermal cycler does not automatically restart. It displays *interrupted* (upper right) and *Restart program YES* (lower left).

The thermal cycler continuously beeps until you press **ENTER** to restart the program. Next, press any key to update the display.

To cancel the restart:

- Press **SEL**.
- Use the arrow keys to toggle to **RESTART PROGRAM NO**.
- Press **ENTER**.
- Press any key to update the display.



## Technical Support

### TELEPHONE

Within the United States: 1-866-358-4354  
Outside the United States: 1-650-266-6100

### EMAIL

[techsupport@fluidigm.com](mailto:techsupport@fluidigm.com)

© Copyright Fluidigm Corporation. All rights reserved. Fluidigm, the Fluidigm logo, and BioMark are trademarks or registered trademarks of Fluidigm Corporation in the U.S. and other countries. All other marks are the sole property of their respective owners. Refer to the software user guide for Fluidigm Patent Notice, Limited License Agreement and Disclaimer. For research use only. Part Number 68000111 Rev. C

Fluidigm recommends that you only purchase TaqMan® dual-labeled probes and/or other licensed PCR assay reagents from authorized sources. If you have any questions regarding whether you have a license to use particular reagents in PCR systems, you should contact the appropriate licensor and obtain clarification and their permission if necessary. For example, certain probes and their use may be covered by one or more patents held by Applied Biosystems and/or Roche Molecular Systems, which may be contacted at the Director of Licensing at Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404 or the Licensing Department, Roche Molecular Systems, Inc., 1145 Atlantic Avenue, Alameda, California 94501.