SimpliAmp™ Thermal Cycler Installation and Operation Quick Reference

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This document summarizes the procedures for installing and using the SimpliAmp™ Thermal Cycler that are described in detail in the *SimpliAmp™ Thermal Cycler User Guide* (Pub. no. MAN0009889). The *SimpliAmp™ Thermal Cycler User Guide* Pub. no. MAN0009889 is available at **www.lifetechnologies.com/simpliamp**.

Figure 1 SimpliAmp™ Thermal Cycler

Note: For safety and biohazard guidelines, refer to the "Safety" appendix in the *SimpliAmp™ Thermal Cycler User Guide* (Pub. no. MAN0009889). Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

How to Install the SimpliAmp™ Thermal Cycler

Materials required:

- Can of compressed air

  Note: The can of compressed air is used to deliver a blast of air into each well of a sample block to remove particles that may have collected during shipping of the product.

- *(Optional)* Electrical protective devices

  Note: Life Technologies supports the use of one or more of the following electrical protective devices:

  - Power line regulator (100–240 V)
  - Surge protector/line conditioner (10–kVA)
  - Uninterruptible power supply (1.5–kVA)

Setup the SimpliAmp™ Thermal Cycler

IMPORTANT! Save the packing materials and box in case you need to ship the instrument to Life Technologies for service.

1. To unpack the SimpliAmp™ Thermal Cycler, open the shipping crate. You would have received one box containing the SimpliAmp™ Thermal Cycler and the accessories.
2. Remove the packing material, then inspect the instrument for shipping damage.

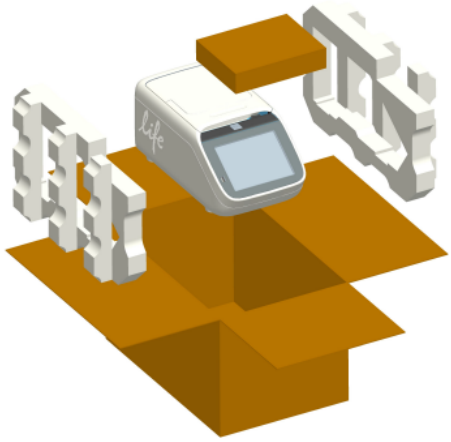

Figure 2 SimpliAmp™ Thermal Cycler packing

3. Move the SimpliAmp™ Thermal Cycler to an installation site that meets the spatial and weight requirements for the SimpliAmp™ Thermal Cycler (see "Technical specifications" on page 3).
4. Connect the SimpliAmp™ Thermal Cycler:
   a. Connect the power cord to the SimpliAmp™ Thermal Cycler.

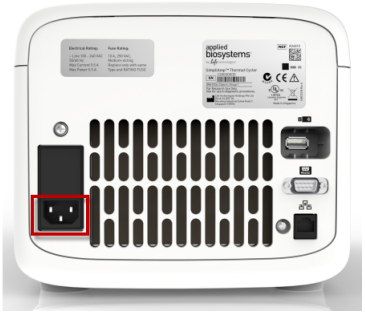

Figure 3 Power cord insertion point

b. Install any desired electrical protective devices.

c. Connect the power cord to a wall plug.

5. Press the power button, then wait for the instrument to start up. Proceed with the installation after the touchscreen displays the Main Menu, indicating that the SimpliAmp™ Thermal Cycler startup is complete.

   When you power on the instrument, the instrument may require about less than a minute to start up.

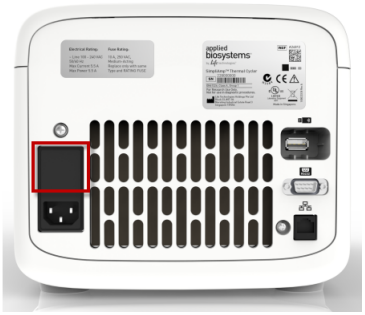

Figure 4 Location of the power button

The Home screen will display following successful installation.

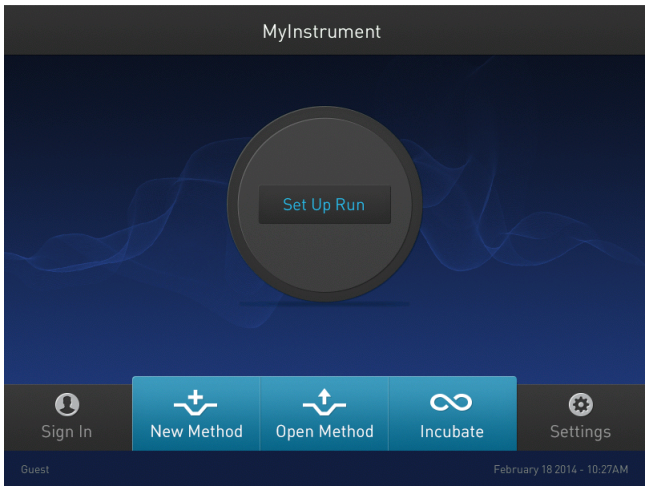

Figure 5 SimpliAmp™ Thermal Cycler

How to use the SimpliAmp™ Thermal Cycler

You can operate the SimpliAmp™ Thermal Cycler from the touchscreen. For detailed instructions on using the SimpliAmp™ Thermal Cycler, refer to the *SimpliAmp™ Thermal Cycler User Guide* Pub. no. MAN0009889.

In the Home screen for the Touchscreen, you can set up a run by creating a new method for a run. To set up a run using a new method:

1. Touch **New Method** or where it says **Set Up Run**.
2. Select a template.
3. In the edit mode, edit the parameters of the method template such as temperature, time, number of steps/stages.
4. To reach advanced editing options, touch **Manage Steps**, followed by touching **Advanced Options**. Advanced editing options include VeriFlex™ blocks for optimization, simulation modes, ramp rates, and AutoDelta.
5. Save the new method in a folder or directly start a run by touching **Start Run**.

How to maintain the SimpliAmp™ Thermal Cycler

To ensure proper operation:

- Regularly:
  - Wipe the SimpliAmp™ Thermal Cycler surfaces with a lint-free cloth.
  - Clean the vents, touchscreen, and sample block of the SimpliAmp™ Thermal Cycler.
  - Clean the sample wells with 100% isopropanol.
- **Use correct consumables.**

  Use only consumables recommended by Life Technologies for the SimpliAmp™ Thermal Cycler. Use of consumables that are larger or smaller than the specified volume can damage the instrument, contaminate the sample block, and/or decrease the PCR yield (due to inefficient thermal transfer).
- **Do not use sharp objects on the touchscreen.**

  Use only your fingers or blunt objects to enter commands on the SimpliAmp™ Thermal Cycler instrument touchscreen. Sharp and/or pointed objects such as writing utensils can damage the surface of the touchscreen.
- **Back up frequently.**

  Routinely back up the configurations and files of your SimpliAmp™ Thermal Cycler to a USB drive. Regular backups protect against data loss caused by user error, power failure, or instrument error. For more information, refer to the *SimpliAmp™ Thermal Cycler User Guide* Pub. no. MAN0009889.

Consumables

Table 1 SimpliAmp™ Thermal Cycler Consumables

Consumable	Cat. No.
Single Tubes	

Consumable	Cat. No.
MicroAmp® Reaction Tube with Cap, 0.2-mL	N8010540/ N8011540
MicroAmp® Reaction Tube with Cap, Assorted Colors, 0.2-mL	N8010840
MicroAmp® Reaction Tube with Cap, Autoclaved, 0.2-mL	N8010612
MicroAmp® Reaction Tube without Cap, 0.2-mL	N8010533/ N8011533
MicroAmp® Reaction Tube without Cap, Assorted Colors, 0.2-mL	N8010833
MicroAmp® Optical Tube without Cap, 0.2-mL	N8010933
MicroAmp® 96-Well Reaction Tube/Tray/Retainer Set, 0.2-mL	403083/ 403086
Reaction Trays	
MicroAmp® 96-Well Reaction Tray for VeriFlex™ Systems	4379983
MicroAmp® 96-Well Reaction Tray/ Retainer for VeriFlex™ Systems	4381850
96-Well Plates	
MicroAmp® Optical 96-Well Reaction Plate	N8010560/ 4316813
MicroAmp® Optical 96-Well Reaction Plate with Barcode	4306737/ 4326659
MicroAmp® Optical 96-Well Reaction Plate with Barcode and Optical Caps	403012
MicroAmp® Optical 96-Well Reaction Plate with Barcode and Optical Adhesive Films	4314320
MicroAmp® EnduraPlate™Optical 96-Well Clear Reaction Plate with Barcode	• 4483354 (20 nos.) • 4483352 (500 nos.)
MicroAmp® EnduraPlate™Optical 96-Well Blue Reaction Plate with Barcode	4483343 (20 nos.)
MicroAmp® EnduraPlate™Optical 96-Well Green Reaction Plate with Barcode	4483349 (20 nos.)
MicroAmp® EnduraPlate™Optical 96-Well Red Reaction Plate with Barcode	4483350 (20 nos.)
MicroAmp® EnduraPlate™Optical 96-Well Yellow Reaction Plate with Barcode	4483395 (20 nos.)
MicroAmp® EnduraPlate™Optical 96-Well Multicolor Reaction Plate with Barcode	• 4483355 (5 nos.) • 4483356 (500 nos.)
MicroAmp® EnduraPlate™Optical 96-Well Clear GPLE Reaction Plate with Barcode	• 4483348 (20 nos.) • 4483351 (500 nos.)
8-Well Strips	
MicroAmp® 8-Tube Strip, 0.2-mL	N8010580
MicroAmp® 8-Tube Strip, Assorted Colors, 0.2-mL	N8010838
MicroAmp® Optical 8-Tube Strip, 0.2-mL	4316567
MicroAmp® 8-Cap Strip	N8011535
MicroAmp® 8-Cap Strip, Assorted Colors	N8010835
MicroAmp® Optical 8-Cap Strip	4323032

Table 2 SimpliAmp™ Thermal Cycler sample handling supplies

Part Name	Cat. No.
MicroAmp® Adhesive Film Applicator	4333183
MicroAmp® Multi-Removal Tool	4313950
MicroAmp® Cap Installing Tool (Handle)	4330015
MicroAmp® 96-Well Base	N8010531
MicroAmp® Splash Free 96-Well Base	4312063
MicroAmp® Centrifuge Adapter	N8013822

Technical specifications

The following table displays the system specifications for the SimpliAmp™ Thermal Cycler.

Table 3 SimpliAmp™ Thermal Cycler technical specifications:

Feature	Specification
Maximum block ramp rate[1]	4°C/sec
Maximum sample ramp rate[1]	3°C/sec
Temperature accuracy	±0.25°C (35 to 99.9°C)
Temperature range for protocol run	0°C to 100.0°C
Temperature non-uniformity[2]	<0.5°C
Dimensions	• Height: 21 cm (8.27 in) • Width: 24.0 cm (9.45 in) • Depth: 46 cm (18.11 in)
Weight	8.3 kg (18.3 lb)

Feature	Specification
PCR volume range	• Supported: 10 - 100 µL • Settable: 1 - 100 µL
Instrument memory	USB, on-board
Display interface	8" color TFT LCD
Power	100-240 V, 50-60 Hz Max: 600 W
VeriFlex™ blocks	• 3 VeriFlex™ zones • Supported 10°C (5°C zone-to-zone) • Settable[3] 20°C (10°C zone-to-zone)
Ambient humidity	15% - 80% Relative Humidity, non-condensing (acceptable range)
Ambient operating temperature	15°C to 30°C (acceptable range)

[1] Reaction volume @ 1 µL
[2] 30 seconds after clock start
[3] Temperature accuracy ±0.5°C and Temperature non-uniformity < 0.75°C

Table 4 Power and communication ports

Port	Description
	AC power cable port
	10/100 Fast Ethernet port for connecting to a network
	USB v2.0 port for connecting to an external network drive, jump drive, or other USB storage device
	RS232 serial communication port for connecting the probe for the Temperature Verification Kit
	USB v2.0 port for connecting to USB-enabled Wi-Fi Card

For Research Use Only. Not for use in diagnostic procedures.

The information in this guide is subject to change without notice.

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