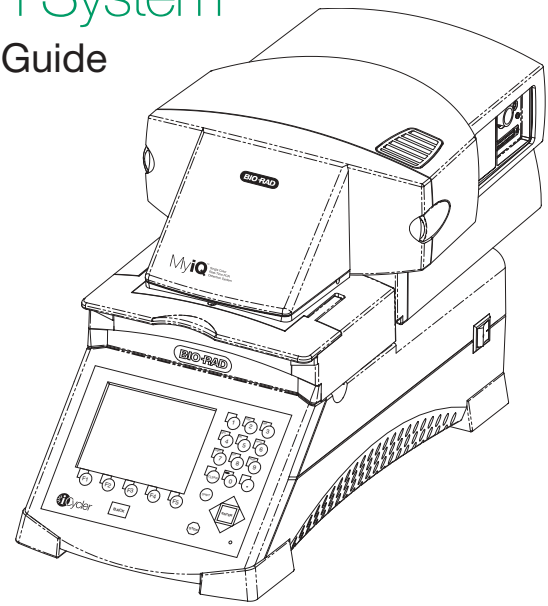
MyiQ™

Single-Color Real-Time PCR Detection System

Installation Guide



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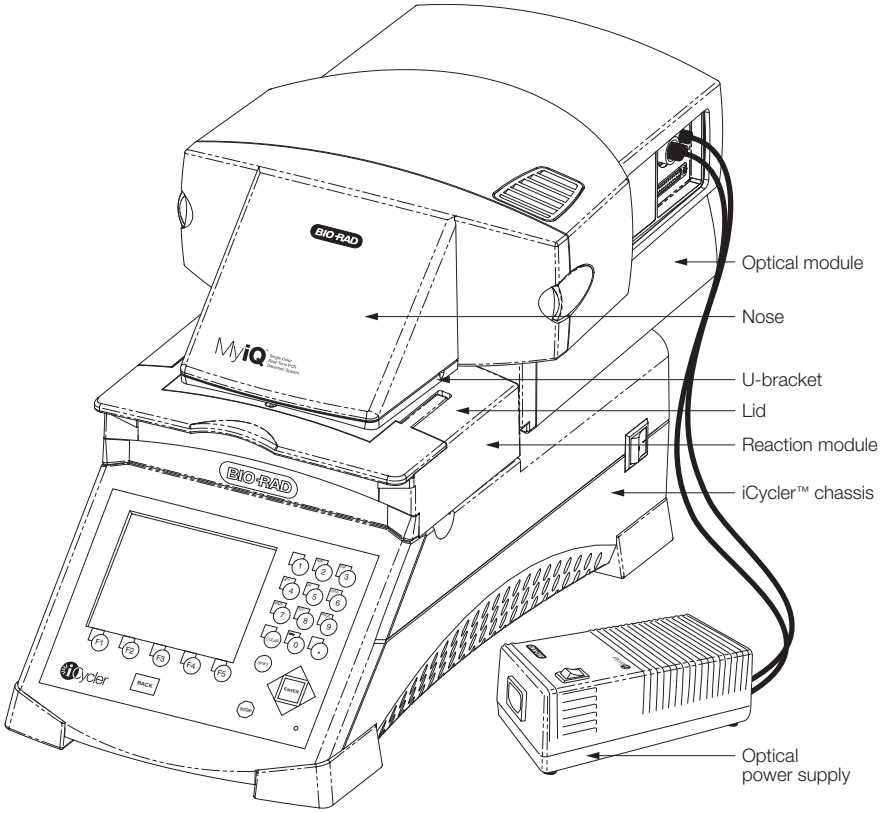

Fig. 1. The MyiQ system.

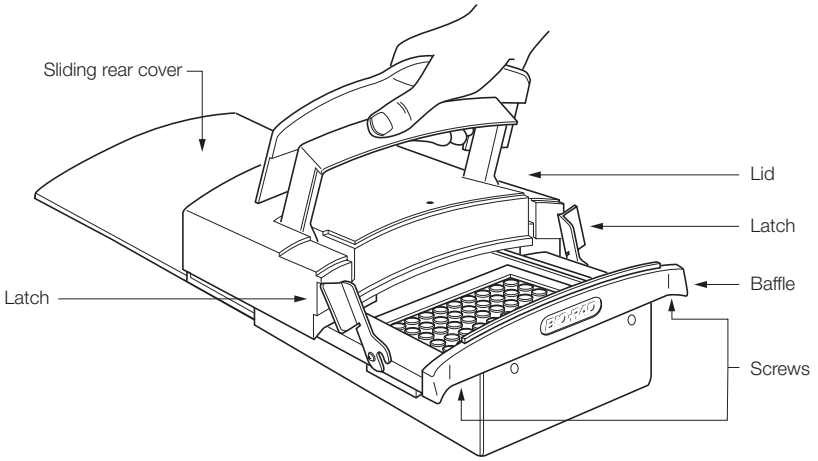

Fig. 2. Removing the lid from the reaction module (front view).

Remove Existing Lid

1. Remove the reaction module from the packing box, or from installed iCycler™ base.
2. On the front of the reaction module (Figure 2), remove the baffle by loosening the two front screws with a Phillips screwdriver (Figure 2). It is not necessary to remove the screws. Push up on the baffle to remove it.
3. Push the green latches down and move the lid forward 16–18 cm (6–7"), exposing the ribbon cables at the back of the reaction module (Figure 3).
4. Gently remove the cables from beneath the plastic retaining clips (Figure 3).
5. Using a Phillips screwdriver, remove the two screws, washers, and spacers behind each ribbon cable connector (Figure 3).
6. Unplug the ribbon cables by pushing the blue connectors toward the retaining clips.
7. Hold the cables up and slide the iCycler lid forward and off of the reaction module.

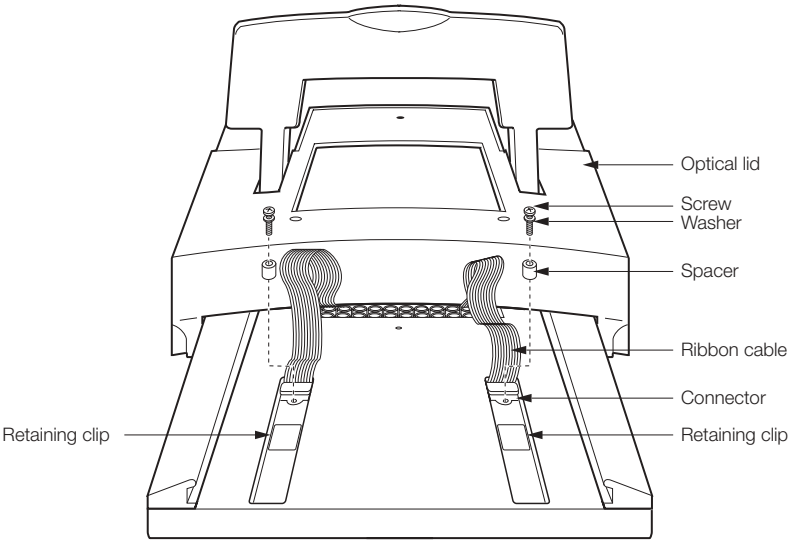

Fig. 3. Disconnecting the ribbon cables between the lid and the reaction module (rear view).

Installing the Optical Lid on the Reaction Module

1. Hold the optical lid in one hand and the ribbon cables in the other. Slide the optical lid onto the tracks of the reaction module from the front.
2. Plug the two ribbon cables into place (Figure 3).
3. Replace the two screws (with washers and spacers) behind each of the ribbon cables, and tighten them with a Phillips screwdriver.
4. Slide the ribbon cables gently back under the plastic retaining clips. The lid should slide freely along the track without binding the cables.
5. Slide the optical lid open, exposing the reaction block; replace the front baffle and push down firmly to seat it, then tighten the screws (Figure 2). Check that the lid closes properly.

Install Reaction Module in Chassis

1. Push the sliding rear cover on top of the chassis as far back as it will go (Figure 2).
2. Push the green latches on the reaction module against the open lid (Figure 2).
3. Lift the reaction module by the handle and install it onto the chassis. Lower the front portion so that it engages with the chassis before the rear. Be sure the rear of the reaction module lid goes over the front lip of the sliding rear cover.
4. Secure the green latches and close the optical lid.

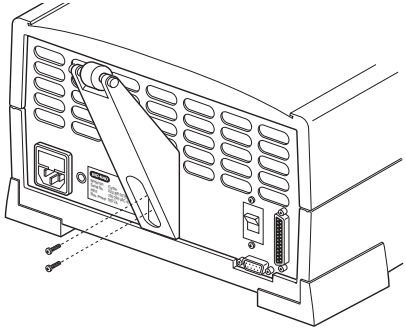

Fig. 4. Attaching the support bracket to the thermal cycler.

Installing the Support Bracket

A support bracket with roller is provided for the optical module. This is mounted to the rear of the iCycler thermal cycler as shown in Figure 4. Adjust the height of the bracket using the two Phillips screws. Both of the screws should be approximately in the center of the slots on the bracket. After the optical module has been installed, confirm that the optical module and lid assembly can be opened and closed readily. If the lid is difficult to open, lower the bracket slightly before tightening the bracket-mounting screws. If the lid is difficult to close, try raising the support bracket slightly before tightening the rear screws.

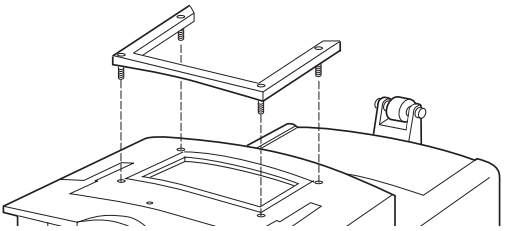

Fig. 5. Installing the U-bracket with screws.

Installing the U-Bracket and Mounting the Optical Module

1. Place the optical module on a flat surface, taking care not to touch the inside of the nose portion of the module.
2. Remove and discard the tape holding the U-bracket in place. Slide the U-bracket from the nose of the optical module (Figure 6, upper panel).
3. Remove the protective label from the optical lid.
4. Place the U-bracket on the optical lid as shown in Figure 5, and secure it using the hex driver and the 4 larger hex screws provided.
5. Slide the optical module onto the U-bracket as shown in Figure 6, lower panel.
6. Secure the optical module to the U-bracket using the two long, thin hex screws and the hex driver provided (Figure 6, lower panel).
7. Slide open the rear case of the optical module by pushing outward on the green latches. Feed the microphone cable through the opening in the housing, and connect it to the optical lid (Figure 6, upper panel). Close the case by sliding the rear portion forward and securing the green latches.

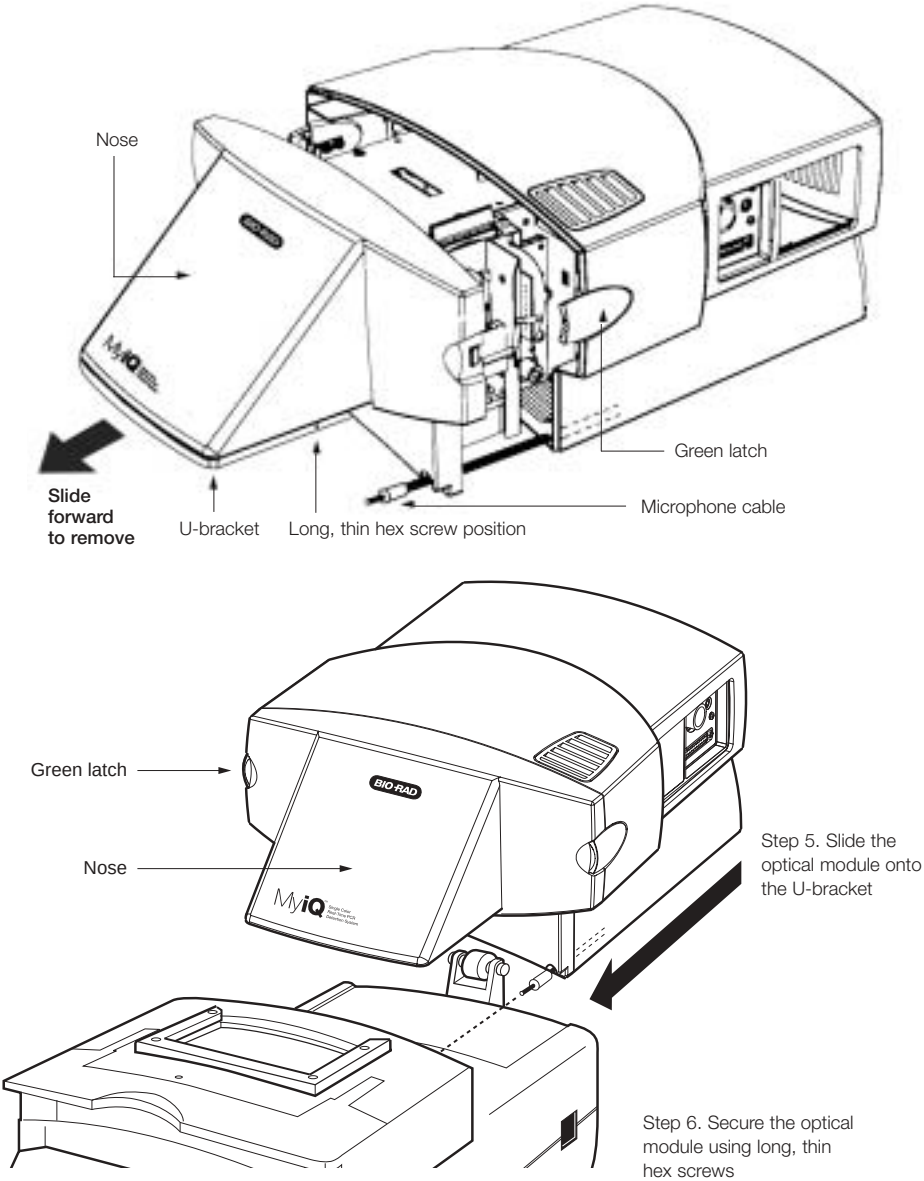

Fig. 6. Mounting the optical module.

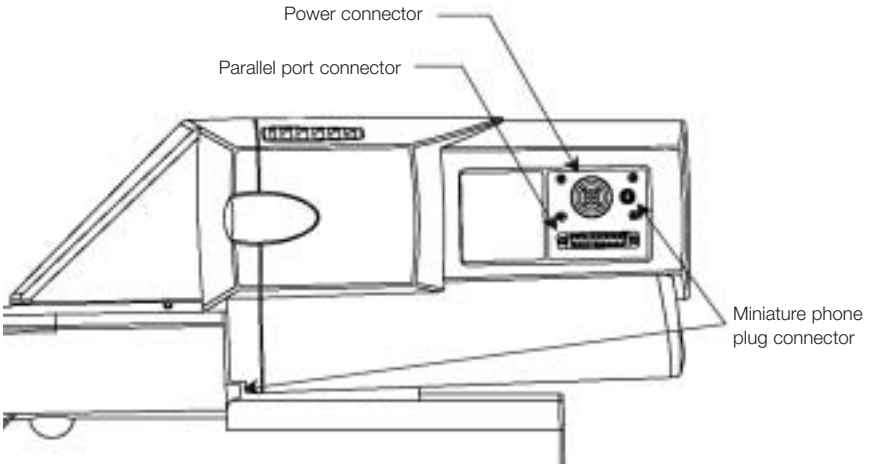

Fig. 7. Side view of MyiQ real-time detection system showing cable connections.

Connecting the System to a Computer

Before attaching cables, turn off all power to the system; close the reaction module by sliding the lid forward and pressing the lid handle down. At the right side of the optical module are three connectors (Figure 7). A serial connector is at the rear of the iCycler thermal cycler (Figure 8).

- Round 9-pin power connector: This provides power to the optical module via the optical power supply. Connect the round 9-pin connector from the optical power supply to the optical module (Figure 1)
- Miniature phone plug connector: This senses when the handle is lifted on the reaction module. When the handle is lifted, the emission filter wheel shifts to the home position, blocking light to the CCD detector. Connect the miniature phone connector from the optical power supply to this connector on the optical module (Figure 1)
- Parallel port connector: Connect the 25-pin parallel cable provided between the optical module (Figure 7) and the computer. The system requires an IEEE 1284-compatible, 8-bit bidirectional or EPP type parallel port. Data are transferred to the computer via this cable
- Serial connector: Connect the serial cable to the rear of the iCycler chassis (Figure 8) and to the serial port on the computer. The MyiQ software directs the operation of the iCycler thermal cycler via this cable

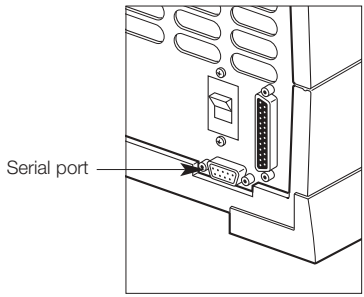

Fig. 8. Rear view of iCycler thermal cycler showing serial connector.

Preparing to Use the MyiQ System

1. Install the MyiQ optical system software on the PC connected to the MyiQ instrument.
2. Connect power cables from the iCycler base and the optical power supply to appropriate power sources.
3. Keep all tools and extra assembly screws provided for the installation process.
4. Double-check all boxes for additional documentation or accessories before discarding the MyiQ packaging materials.

The MyiQ single-color real-time PCR detection system is now ready for use. Review the MyiQ detection system instruction manual for detailed guidelines on instrument use.

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