

Thermal Slide System Instructions

Description:

The Bioptechs Thermal Slide System provides the user with a convenient means of observing temperature controlled specimens on an upright microscope. Specimens are placed on a 25mm x 60mm specially treated slide that is then inserted into a slide carrier and placed into the specimen holder on the microscope stage. It is quick to setup and easy to use. Please review the simple setup and operation instructions prior to use.

Setup Instructions:

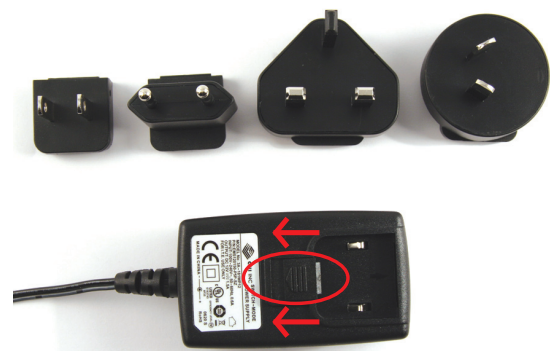
1. Mount the controller on its stand by inserting the wire support post into the sockets in the bottom of the heat sink as shown. (Figure 1)
2. Select the appropriate connector for your AC service and attach it to the power supply. Remove the place holder by depressing the plug retainer tab located on the back side of the power supply, and replace it with the connector of your choice. (Figure 2) Plug the power supply into your AC outlet.
3. Check the orientation of the slide release lever (#1), make sure it is in the orientation as shown (Figure 3).
4. Load a slide into the Thermal Slide carrier with the silver side down in the orientation shown, please note the difference in electrical pads on the slide (#2) this is critical for proper thermal regulation, insert slide into slide carrier (#3). To remove a slide simply rotate the slide release lever (#1) counter clockwise gently and the slide will eject. (Figure 3)
5. Insert the 4 pin mini-DIN connector wire into the side of the controller (Figure 4), plug the other end of the wire with a black flat 4 pin connector into the thermal slide carriers gold pins. (Figure 5) Orientation or polarity does not matter.
6. Place the Thermal Slide carrier with the Thermal Slide on the microscope stage. (Figure 5)
7. Plug the two pin Reference Thermistor into the controller.
8. Plug the power supply cord into the side of the controller. (Figure 4) A red LED will light on side of controller next to power port. Display will illuminate on front of controller, and a LEDs will illuminate indicating one of the three modes: setpoint, stage, or reference.

Figure 1



Locations to install controller stand

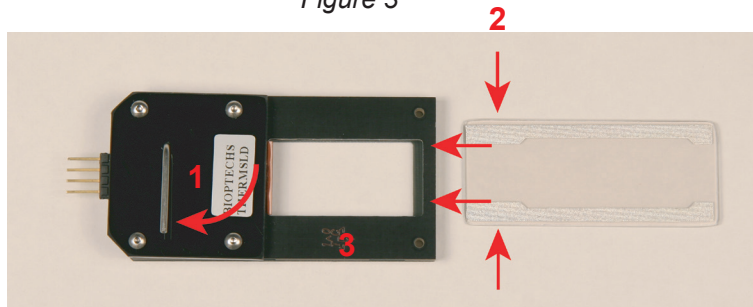
Figure 2



Power adapter and plug adapters

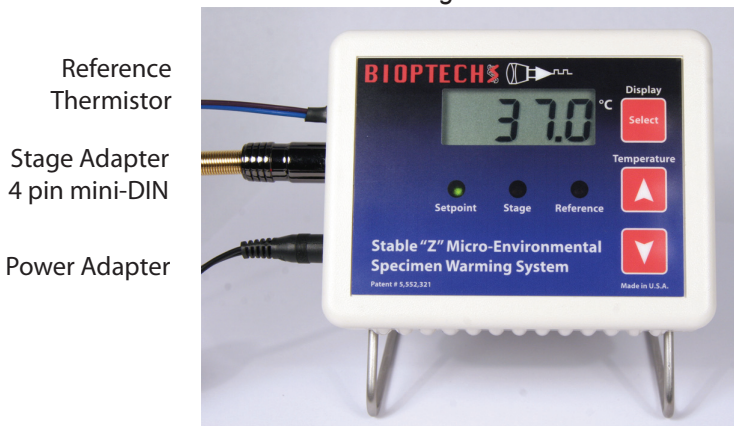
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Figure 3



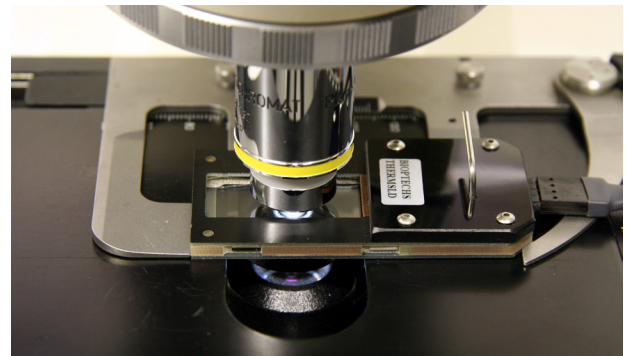
Thermal Slide Retainer with Thermal Slide

Figure 4



Location and description of cables

Figure 5



Thermal Slide on microscope

Operation:

Upon power-up the Stable Z will display the setpoint temperature as indicated by the illuminated LED labeled Setpoint. Every press of the SELECT key will cycle through the three display modes. With all components assembled, allow the controller and Thermal Slide to equilibrate approximate 5 minutes. Press the SELECT button until the led labeled Reference is illuminated. The display will now indicate the temperature of the reference probe. Measure the actual temperature of the slide by placing the reference probe in a drop of oil at the specimen location of the slide. Note the reference temperature and adjust the setpoint temperature accordingly to get desired temperature at specimen region. Temperature range is from 20°C to 50°C. The temperature can be incremented by pressing the up and down arrows only while in SETPOINT mode. During operation it is best but not necessary to leave the controller in the Stage display mode. This completes the slide characterization process. The Thermal Slide should be cleaned and replaced in the Thermal Slide retainer. It is now ready to accept your live specimen. The Thermal Slide can accommodate a 18mm square or round coverslip. To seal the perimeter use Velap, a 1:1:1 mixture of Vasolene, Lanolin and Paraffin kept at 50°C but when dispensed with a transfer pipette will partially solidify at 37°C.

Cleaning:

Wipe the controller with a damp cloth or mild water based cleanser. Do not use solvents. The Thermal Slide Retainer can be cleaned with alcohol. Do not immerse retainer or controller in liquids! The Thermal Slide can be cleaned with a mild soap wash, and alcohol, slide may be autoclaved on a short cycle. Do not use if the bottom surface of Thermal Slide is wet as it can damage the Thermal Slide coating, dry slide thoroughly before use.