

More Blue Heater Strap Operation

The **More Blue** heater strap is designed to maintain a stable temperature for optical systems, preventing dew formation and stabilizing focus when air temperatures are changing. The **More Blue** heater system includes 2 temperature sensors for a closed loop control system. One sensor is located in the heater strap. The ambient temperature sensor is located in the inline control switch housing.



Power Options

For small systems, two option variations are available. The first type plugs directly into a USB-A port and utilizes 5V power. The second option plugs into a 12V power supply. In the 12V variation, the power input connector is a female barrel connector (5.5mm barrel, 2.1mm center pin). The center pin polarity is +12V. Applying power turns on the heater strap to the last mode of operation. There is no separate power switch for the heater.

Operating Modes

The **More Blue** heater has two modes of operation -- absolute temperature mode, and relative temperature mode. Both modes are controlled from the inline control housing. A red LED at the upper left of the control housing flashes when power is applied to the heater band.



A single control button (marked with up/down arrows) is used to set the operation of the dew heater. Some settings require short-presses of the button (press and release quickly), and others require long-presses (press until the display changes).

A red 3 character display displays the settings and temperature (in degrees Celsius) when the button on the right of the control housing is short-pressed. The current temperature at the heater band is displayed for about 10 seconds after the button is pressed. Both the heater indicator and character displays are turned off automatically when the 10 second timeout expires.

After short-pressing the button or immediately after applying power, if a single temperature value is displayed, the controller is in Absolute Temperature mode. If the display is alternating between two values, it is in the Relative Temperature mode. To switch operation, press and hold the control button until the current mode is displayed:

- “-H-” ... indicates absolute mode
- “H-L” ... indicates relative mode

While the mode is displayed, short-pressing the button will switch the operating mode.

The controller will remember the operating mode and settings even after being powered off.



Absolute Temperature Mode

The absolute temperature mode holds the temperature at the heater band at a fixed temperature. This is useful for maintaining optics at a fixed temperature despite a fall in ambient temperature, minimizing focus shifts. The range of setting is 0 - 50C.

Pressing the control button momentarily displays the current temperature reading at the heater band. If the temperature reading is alternating between two different temperature values, the heater is operating in relative mode. To switch to absolute mode, press and hold the control button until the mode is displayed.

If the current temperature is below the set temperature, the heater LED will flash as power is applied to the heater band. If the set temperature is below the current temperature, no power is applied and the status LED will always be off.

To set the desired temperature, short-press the button to activate the display, then long-press the button until the temperature is displayed as: xxC, where “xx” is the current setting for the desired temperature. The upper-case “C” is a reminder that you are in Absolute Temperature mode. Short-pressing the button within a few seconds increases the desired temperature by 1 degree Celsius. To advance rapidly, press and hold the control button. If you pass your desired temperature, continue going up until the setting wraps around. The set temperature will go up to the maximum temperature of 50C and then wrap around to 0C.



Relative Temperature Mode

In this mode of operation, the **More Blue** controller will maintain a set temperature difference above the ambient temperature. This mode of operation is useful for insuring against dew condensation on your optics. The ambient temperature is measured at the control housing.

To set the desired temperature difference, short-press the button to activate the display, then long-press the button until the temperature difference is displayed as: xxc , where “xx” is the current temperature difference setting. The lower-case “c” is a reminder that you are in the Relative Temperature mode. Short-pressing the button within a few seconds increases the desired temperature by 1 degree Celsius. To advance rapidly, press and hold the control button. If you pass your desired temperature, continue going up until the setting wraps around. The set temperature will go up to the maximum difference of 20C and then wrap around to 0C.

