

User Guide for External Controller for THORLABS TED2000C

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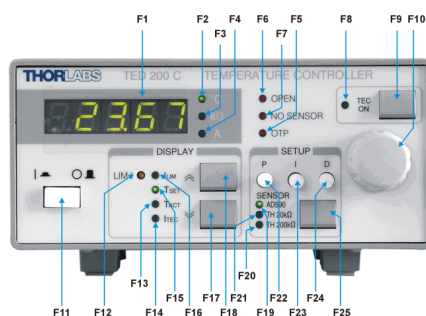
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1 Introduction

This guide will walk you through the steps required to connect and use the external controller.

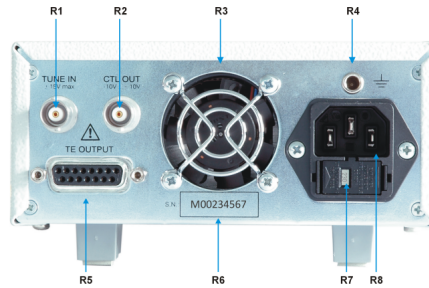
2 Front Panel

The front panel of the TED2000C has several buttons and displays that are used to control and monitor the temperature. The following picture shows the front panel of the TED2000C.



3 Back Panel

The following picture shows the back panel of the TED2000C.



4 Connections

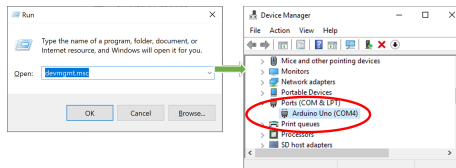
To connect the external controller to the TED2000C, follow these steps:

1. Connect the "Tune In" (R1) on the TED to the BNC connector labeled "OUT" on the box using BNC cables.
2. Connect the "CTL OUT" (R2) on the TED to the BNC connector labeled "FROM TED" on the box using BNC cables.
3. Connect the USB cable to your computer and to the Arduino connection on the side of the box.
4. Connect the power supply to the wall.

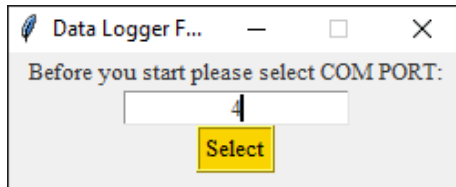
5 Operation

To use the external controller, follow these steps:

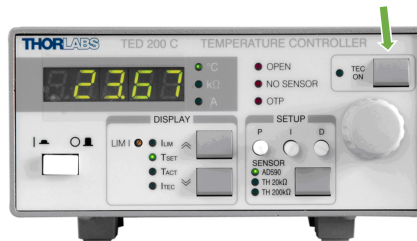
1. Make sure that the potentiometer (F10) on the TED is turned all the way to the left.
2. Turn on the TED by pressing the F11 button and make sure the TSET value on the screen (F1) is very close to zero.
3. On your computer, open the Device Manager. To open the Device Manager, press the Windows+R keys on your keyboard, type devmgmt.msc, and press OK.
4. Check which COM port the Arduino is connected to.



5. Open the control software and enter the desired COM port.



6. A control window will open. Enter the desired temperature in degrees Celsius and press the "SET TEMP" button.
7. Press the TED ON button (F9) on the TED to start the temperature control.



8. If you want to record the temperature, press the "START LOG" button and, at the end, press the "STOP AND SAVE" button. The file will be saved in a folder containing the GUI file. To perform multiple measurements, exit and re-enter.

