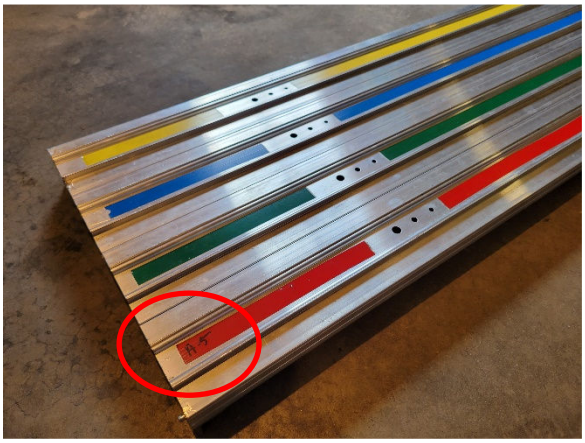
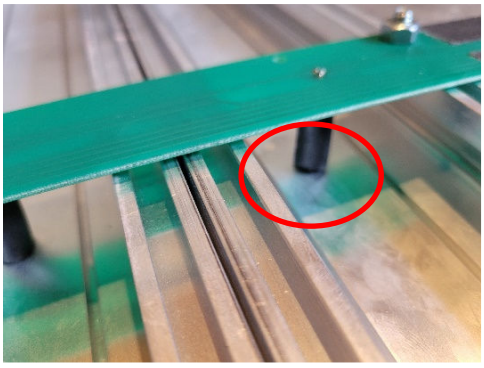
Main Track Setup

1. Start with track piece A-5. Place the track piece face side down and find the end with the holes in the track.



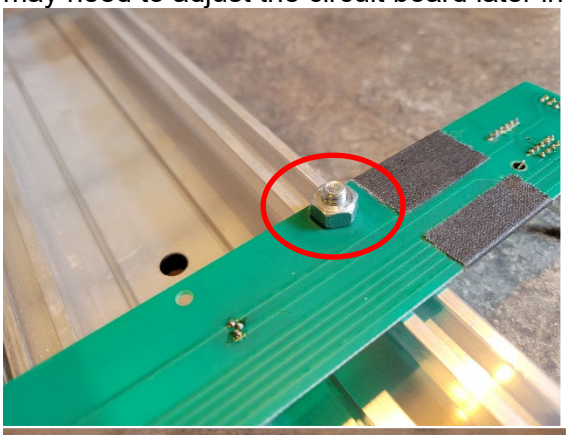
2. Find the small circuit board. The sensors will be covered with pieces of vacuum hose.

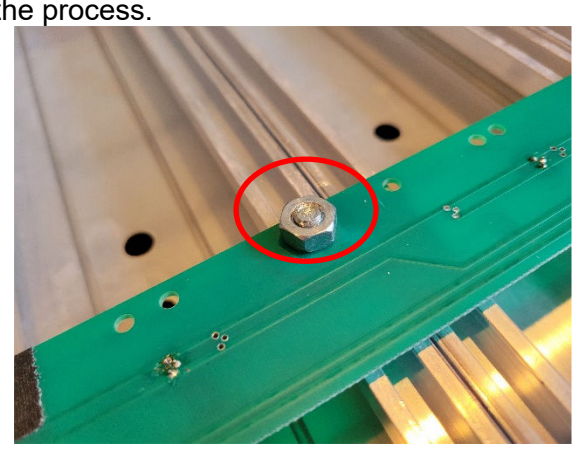
3. Align the circuit board so that the hoses line up with the smallest holes on the track. The connecting end of the circuit board will be on the right if you are looking toward the of the track.

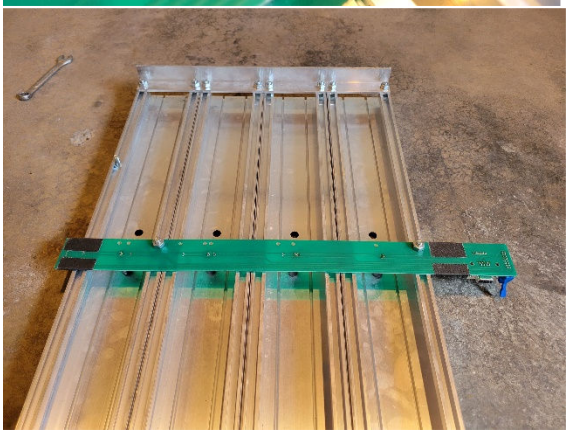


Main Track Setup

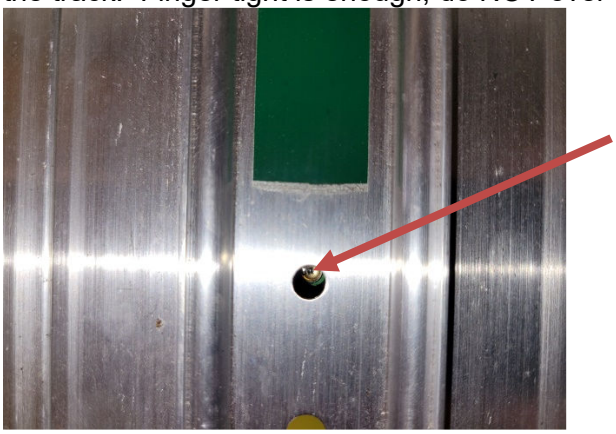
4. Remove the two nuts that line up with the holes in the circuit board, then finger tighten them onto the board to secure it to the bottom of the track. Do NOT over tighten as you may need to adjust the circuit board later in the process.







5. Carefully turn the track back over and make sure you can see the sensor through each of the four small holes in the track. Make adjustments as needed by reaching under the track and loosening and retightening the two nuts that keep the circuit board attached to the track. Finger tight is enough, do NOT over tighten.

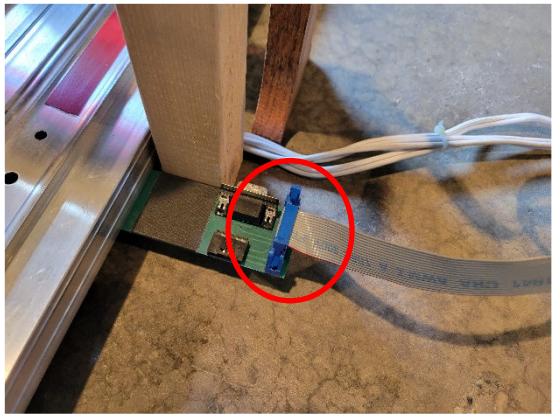


6. Set the light bar over the top of the track and in front of the circuit board. Run the power cords underneath the track so they come out on to the left side of the track. The lights are offset so that they will shine over the holes and sensors from the circuit board.

Main Track Setup

These lights will get very hot, so please take special care not to allow anyone to touch them while plugged in.

7. Place the “Race Master” finish line in front of the light bar and attach it to the circuit board.



8. Connect remaining straight pieces of track (A-4 and A-3). Pins will line up if connected in order. Use C-Clamps to keep track together.
    - Note: Because the track lays on the floor, C-Clamps will need to be adjusted to the size of the gap, then slid over the pieces of track to prevent separation.

9. Connect the curved piece (A-2) to piece A-3 in the same manner as above. Use C-Clamps again by adjusting them first and placing them into position.

Main Track Setup

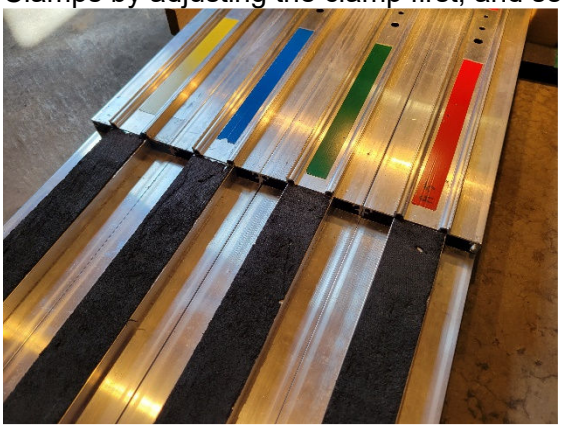
10. Prepare track piece A-1 by assembling the legs and the base. Loosen the nuts and bolts on the legs and lift both the base and the legs until the holes match up. Secure the legs to the base on both sides of the track by finger tightening the nuts on the bolts.



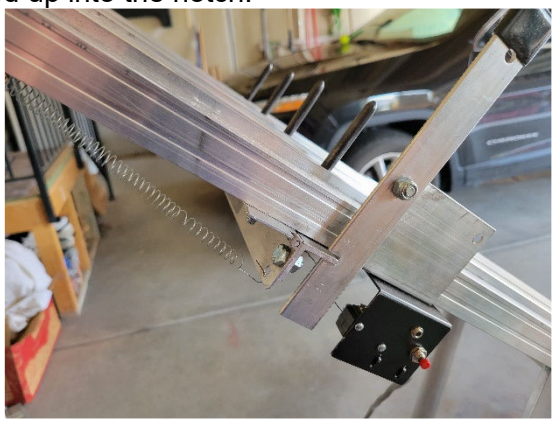

11. Carefully turn track A-1 over and set in place connecting to the curved piece A-2. Secure the remaining C-Clamps to keep the pieces together. Do NOT overtighten the C-Clamps to avoid damage to the track.

Main Track Setup

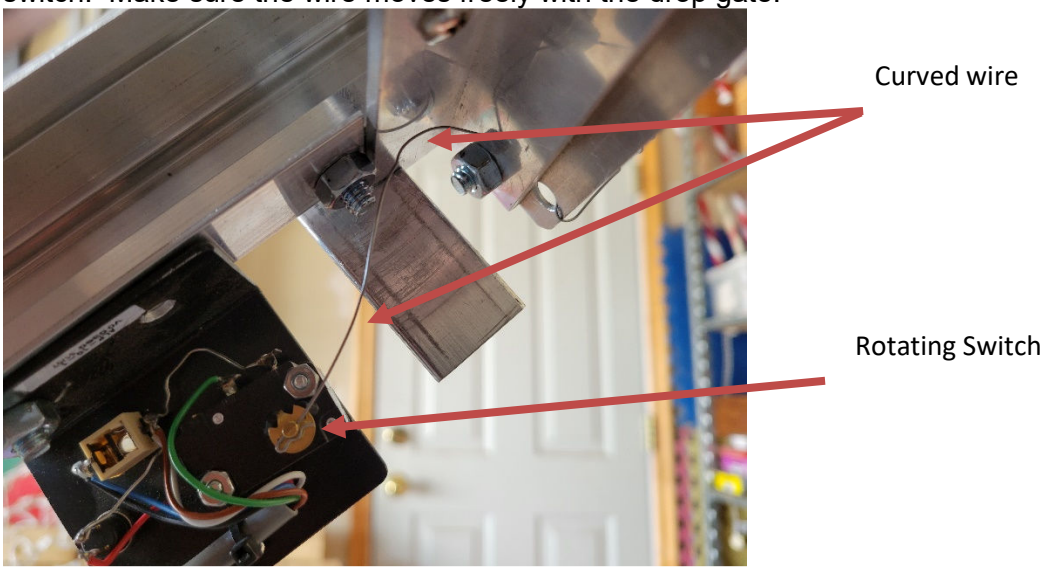
12. The last piece of the track (A-6) is the piece that stops the cars at the end of the race. This piece lines up differently and has no pins. Attach A-6 to the end of A-5 with C-Clamps by adjusting the clamp first, and setting it in place.



13. Adjust the starting lever by lifting up on the handle and pushing the notched side down into position. The drop gate can then be lifted up into the notch.

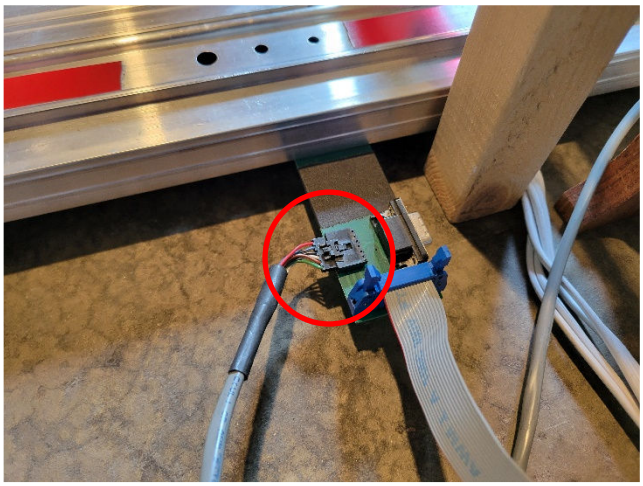


14. In order for the timer to work, the wire needs to sit under the drop gate such that the rotating switch is activated when the gate drops. Resetting the gate will also reset the switch. Make sure the wire moves freely with the drop gate.

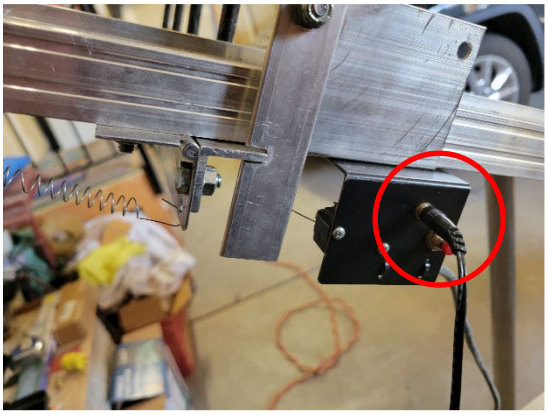


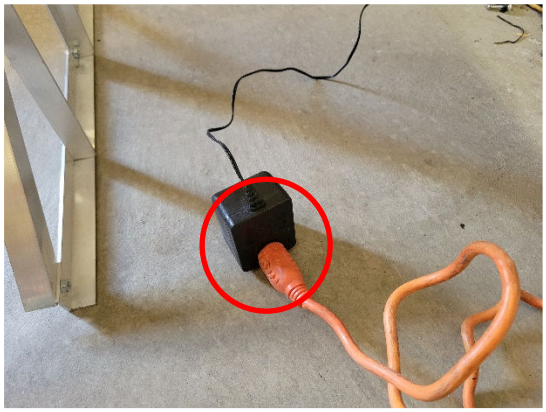
Main Track Setup

15. Connect the long wire from the starting gate to the Circuit Board at the finish line. Attach the 9-pin connector up by the starting line, run the wire under the ramp and along the left side of the track, and attach the 6 pin connector to the Circuit Board.



16. Connect the power supply to the starting gate. This will also power the Race Master finish line. You should see zeros above all 4 lanes.

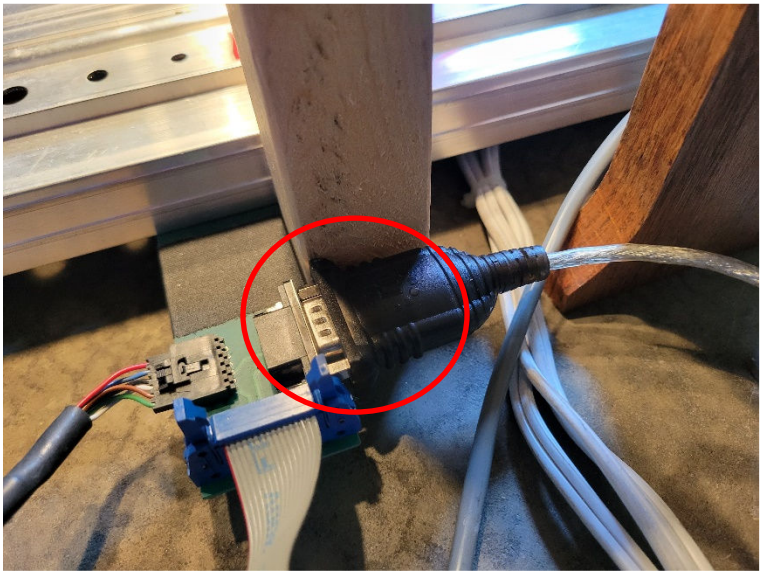




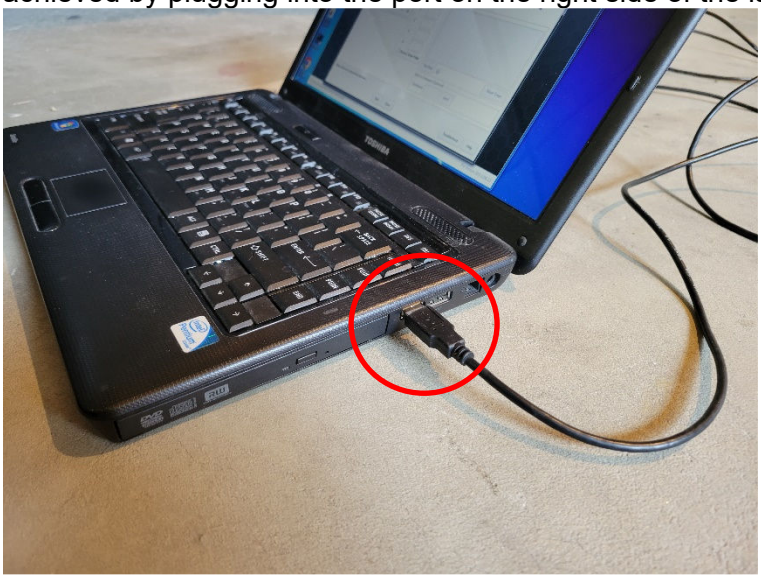
17. Plug in the light bar. Run a couple of test races to get a feel for how it operates.
    - Drop the starting gate by releasing the lever. The timers should start counting.
    - Run cars or your hands over the sensors. The timers should stop and provide a time.
    - Reset the starting gate by setting the lever back upright, and the drop gate in the notch.
    - Push the red “Reset” button to reset the times to zero.
18. The track is ready to go and a manual race could be run at this point if no computer is needed.

Computer Setup

1. Find the Serial to USB adapter and connect the serial end to the Circuit Board by the finish line.

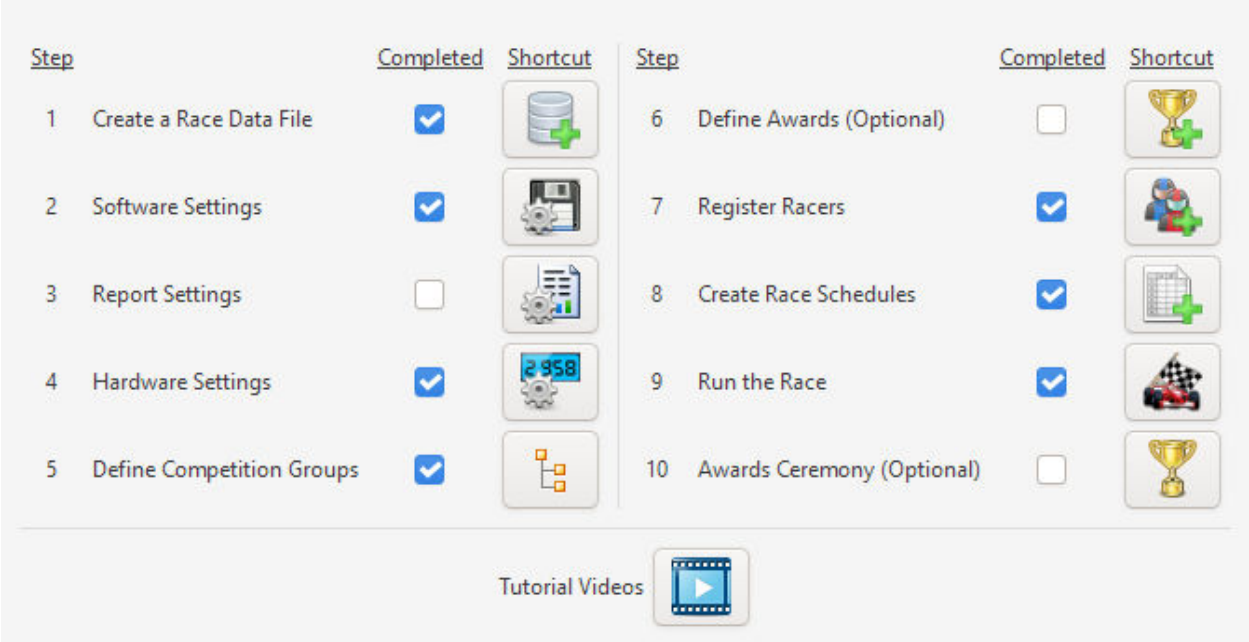


2. Plug the USB end into the laptop. The USB must go into COM5 in the laptop. This is achieved by plugging into the port on the right side of the laptop, closest to the user.



3. Plug in the power adapter to the laptop and turn on the laptop.
4. Launch GrandPrix Race Manager.
5. To run a race, you will need to go through the following steps in the application.

Computer Setup



- Create a race file (or open an existing file if one has already been created). The file can be created pretty much anywhere on the hard drive, but I would suggest using "C:\Pinewood Derby\Races". Give the new file a name to complete this part of the setup.
- Most Software Settings can remain as they are. The only setting that really needs to be adjusted is if you are racing with Sub-Groupe. If so, go to the Standings tab, and check the box to "Enable Subgroups".
- Hardware Settings require that you test the communication between the laptop and the track. Simply click the button to "Start Testing" and follow the prompts to "End Testing" Then close the window.
- Define Competition Groups is where you decide what groups (and / or subgroups) will be competing. You must create at least one group.
- Registering Racers can only be done once the Competition Group has been created. Add racers by clicking the "+" sign at the top of the screen. Enter the racers that will be participating in the race.
- After all racers have been entered and have "Passed", create a race schedule for the race. Smaller groups could race 2 times per lane, while larger groups would likely only race 1 time per lane.
- Finally, you are ready to Run the Race. Be sure to click the "Ready Timer" button before your first race, and at any point after if it is not "Ready" prior to a heat.

6. See the Tutorial Videos or the application help section with other questions about GrandPrix Race Manager.

Other Setup Items

1. The cordless microphone can be used by connecting the ¼ inch cable from the microphone base to the input on the speaker. Plug the microphone base into the power strip, and the speaker is powered by the USB power supply.

2. Use the VGA cord to connect the laptop to the Projector and display the results on a whiteboard or lightly colored wall.