

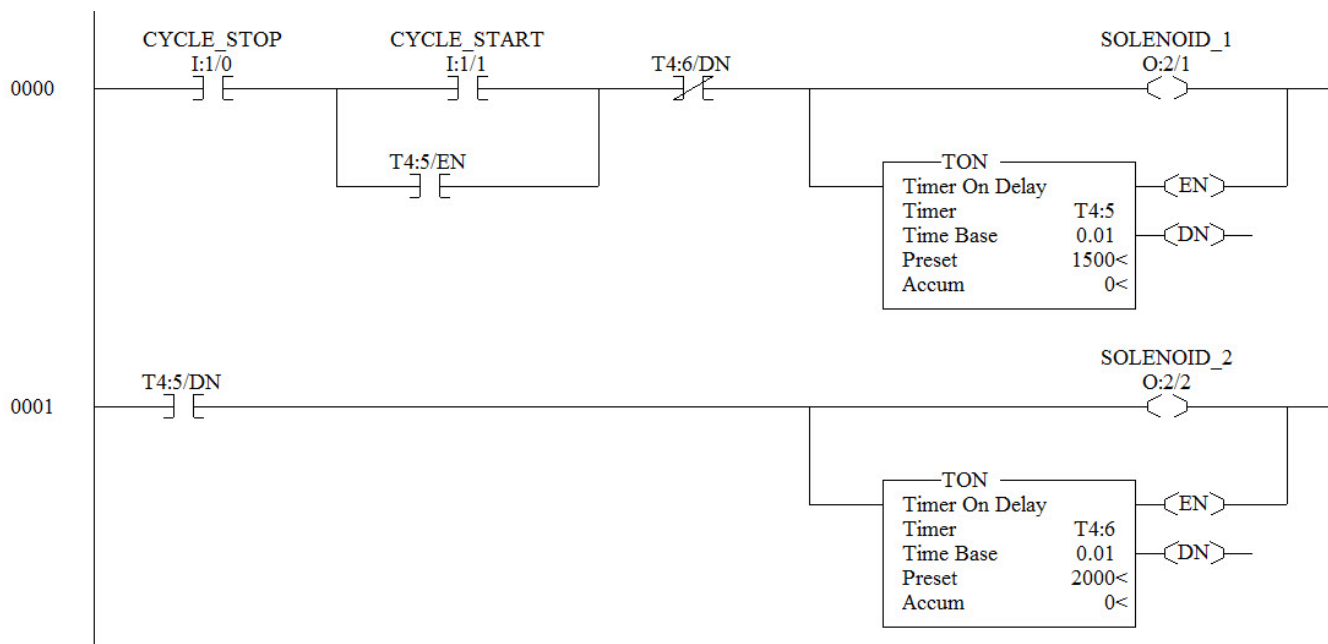
## Allen Bradley SLC-500 Training Timer Cascading Lab

Upon completion of this lab, the student should be able to:

1. Create a project and program the ladder rungs to match the program in this lab.
2. Interpret the operation of the timer status bits and how they are used in the program.
3. Change the preset value of a timer from the data file.
4. Explain the operation of a two rung program with two timers, and how it controls the outputs.
5. Toggle the address symbols and descriptions on/off.

**IMPORTANT:** If this lab is ran on a virtual simulator (through RSEmulate500), the student must toggle bit I:1/0 to a “1” to simulate a N.C. wired stop pushbutton. If the lab is ran on an SLC-500 simulator, the bit will be a “1” due to the stop pushbutton being wired N.C. and turning on the input indicator.

Create the following program within a new RSLogix500 project. Save it to a local drive. Download it to the SLC-500 processor, go online, and then perform the following tasks.



**Figure 1. Displaying the MAC, IP and Subnet Mask Addresses.**

1. Pull the **Cycle\_Stop** pushbutton to reset it. Press the **Cycle\_Start** pushbutton.

How long until **Solenoid\_1** comes on?

How long until **Solenoid\_1** shuts off?

2. Pull the **Cycle\_Stop** pushbutton to reset it. Press the **Cycle\_Start** pushbutton.

How long until **Solenoid\_2** comes on?

How long until **Solenoid\_2** shuts off?

3. What two possible conditions will cause the hold in contact to drop out on the first rung?

4. Change the delay time of the first timer to 13.6 seconds from the data table view.

Change the delay time of the second timer to 18.5 seconds from the data table view.

The following graphics will show how to get to the data table view and change the timer preset.

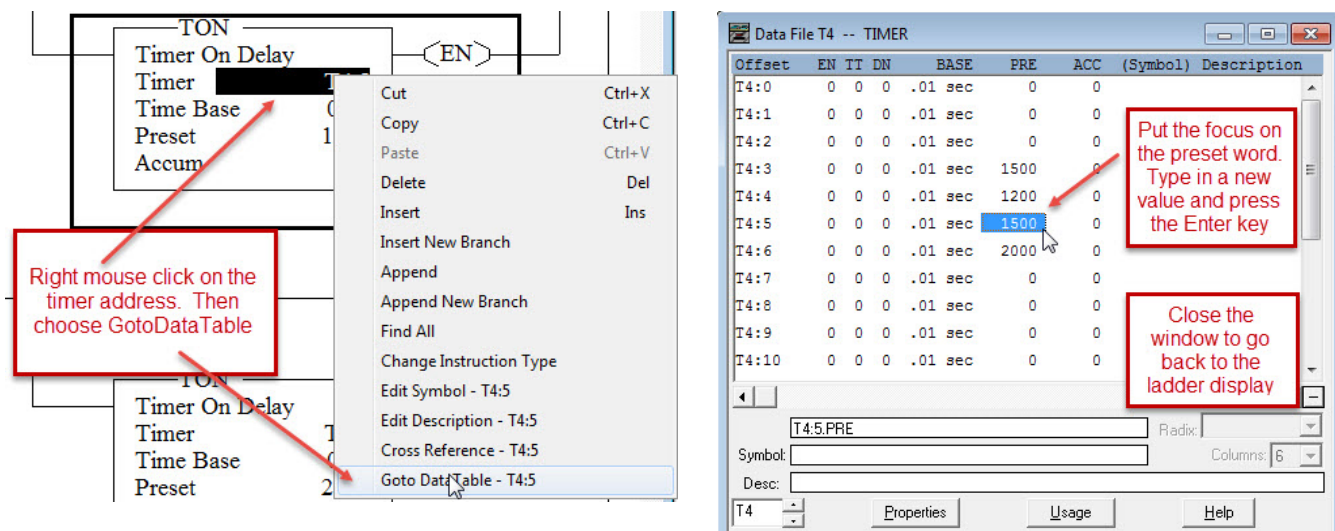


Figure 2. Displaying the Data Table information.

5. Toggle the address symbols off in the ladder display.

The following graphic will show how to turn the symbols and address descriptions on/off.

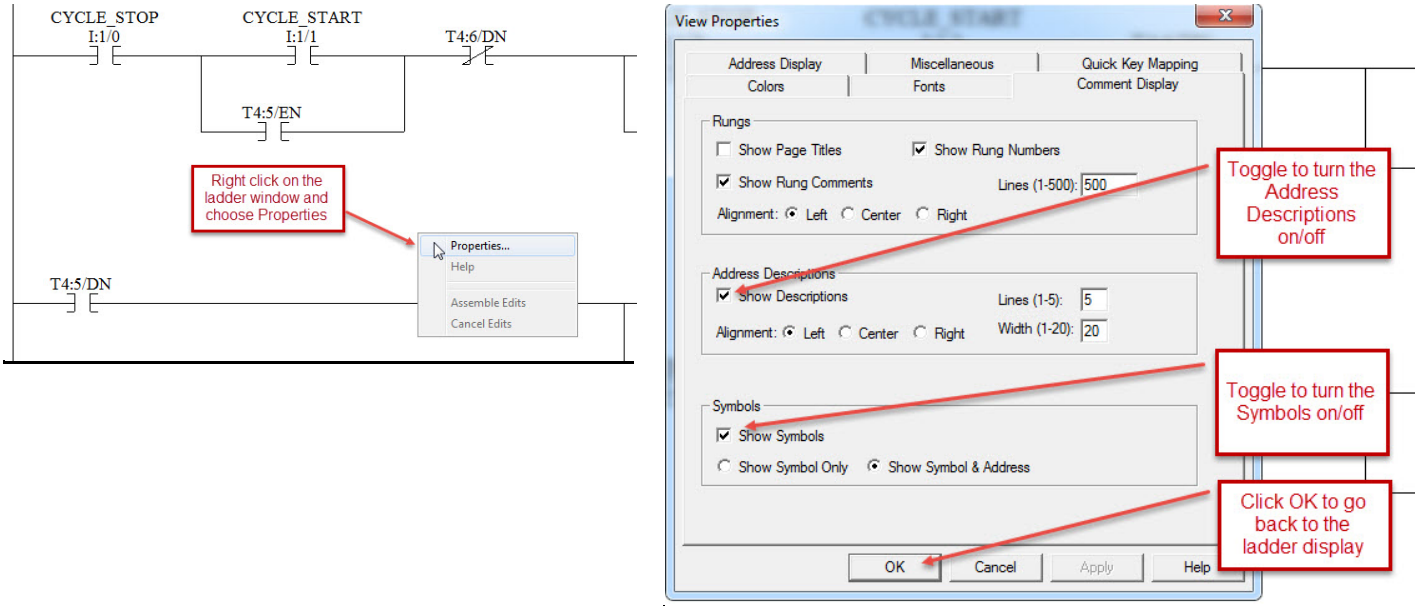


Figure 3. Turning the address descriptions and symbols on/off.

**Questions:**

1. What value would need to be in the preset of timer T4:5 to make it a 13.6 second timer?
2. What value would need to be in the preset of timer T4:6 to make it an 18.5 second timer?
3. T F If the CYCLE\_STOP button is pressed, the timers will stop timing and hold their accumulated values intact, until the timers start timing again.
4. List the steps to turning the address symbols/descriptions on/off on the ladder display?
5. Which timer controls the amount of time SOLENOID\_2 is “on”?
6. What steps would a user go through to change the timer preset value from the data table view?

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