

Exercise - Test the Program

Learning Outcomes

By the completion of this exercise you will: be able to:

- Start the simulator
- Operate the simulator to test a program

1 Start the Simulator.

- Go to the commissioning tab in SoMachine Basic and click the **Start Simulator** button.



The simulator will be started and the program will be loaded into the simulator.

The image shows a screenshot of a simulator window titled 'TM221ME16T/G'. Inside the window is a table with four columns: 'PWR', 'IN', 'OUT', and 'ANA'. The rows are labeled 'RUN', 'ERR', and 'STAT' on the left. The 'PWR' column has values 0, 1, 2, 3, 4, 5, 6, 7. The 'IN' column has values 0, 1, 2, 3, 4, 5, 6, 7. The 'OUT' column has values 0, 1, 2, 3, 4, 5, 6, 7. The 'ANA' column has values 0 0, 1 0, and is empty for the 'STAT' row.

	PWR	IN	OUT	ANA
RUN	0	0	0	0 0
ERR	1	1	1	1 0
STAT	2	2	2	
	3	3	3	
	4	4	4	
	5	5	5	
	6	6	6	
	7	7	7	

Do not operate anything in the time management window.

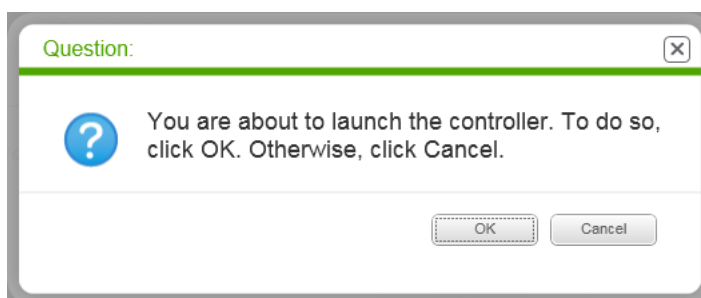
The **Run** indicator in the simulator will be flashing to show that the simulator is stopped.

Exercise - Test the Program (cont.)

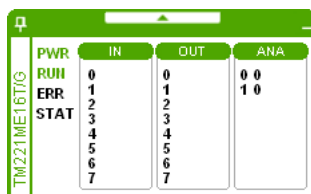
- ii. Click the **Run Controller** button on the commissioning screen to run the program in the simulator.



A pop-up window will be shown asking to confirm the action.

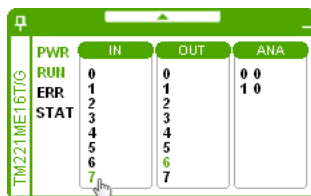


Click the OK button to confirm and the **Run** indicator will change to a solid green.



2 Test the program.

- i. In the simulator window, click the number 7 representing the last input. The input will turn green to show that it is on.



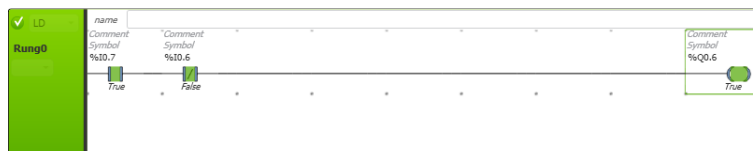
Output 6 should also turn on. This is being controlled by the program. If input 7 is on and input 6 is off, then output 6 should turn on.

- ii. If output 6 doesn't not turn on then check the program carefully for any mistakes.

Exercise - Test the Program (cont.)

3 Monitor the program.

- i. Switch to the programming tab and observe the state of the program. The normally open contact will be coloured green and shown as true, indicating that input 7 is on. The output coil should also be coloured green to show the output being controlled by the program.



Operate the two inputs and observe the effect on the program.

4 Further testing.

- i. Ensure that input 7 is off. If not, click input 7 to turn it off. Click input 6 to turn it on. There should be no effect.
- ii. Click input 7 to turn it on. This time output 6 should not come on as it is being prevented by the normally closed contact for input 6 which is now true.



Note:

The True/False indication shows the state of the input, not the state of the coil or contact. The green colouring shows the state of the contact. This can be confusing for inverted contacts and coils but a green colour will always signify power or on.

5 Stop the simulator.

- i. Go to the Commissioning tab and click the Stop Simulator button to stop the simulator.

