Allen Bradley CompactLogix Training
Timer Toggle Lab

Objectives:

Upon completion of this lab exercise the trainee should be able to:

1. Explain the operation of a TON instruction and the associated status bits.

2. Explain how two TON instructions can control the on and off time of an OTE instruction .

3. Change the preset of a timer while Online to the processor.

4. Explain how a negative number in a timer can fault the processor.

Procedure:

1. Key in the Alias Tags for the Base I/O Tag addresses.
   Key in the following program with RSLogix5000 and save to the hard drive.
   Start up RSLinx and create a driver (path) to the ControlLogix processor.

2. Download the program from the hard disk to the ControlLogix processor.

3. Go Online to the ControlLogix and you should see the following program.
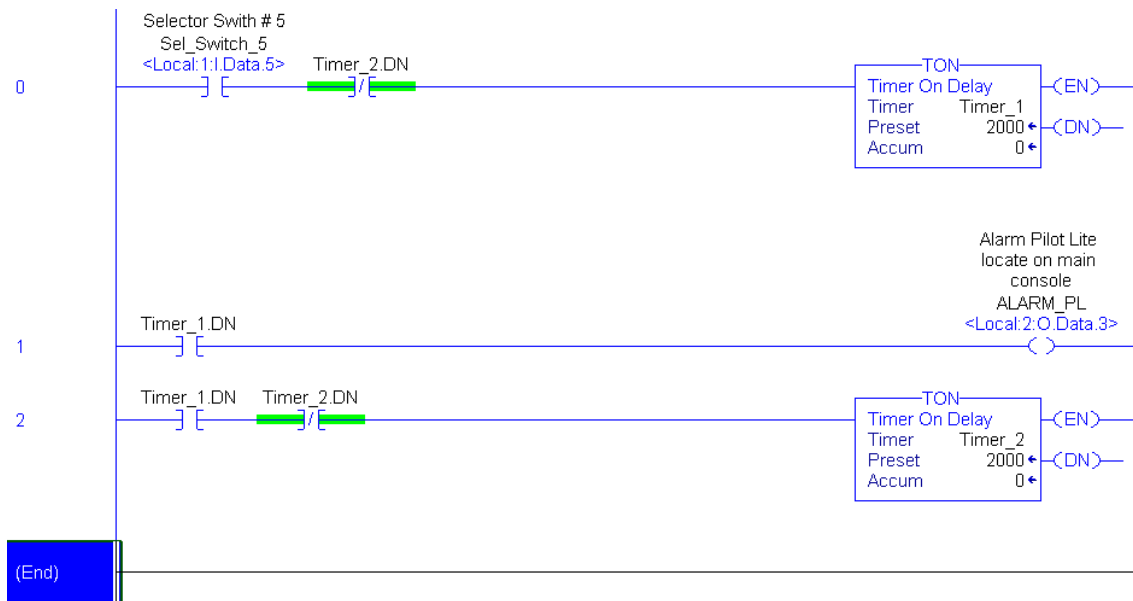   Put the processor into the RUN (or Remote Run Mode).

Figure 1. A program to control the on/off time of a pilot light.

4.   Turn on "Sel_Switch_5".

    When does the "ALARM_PL" come on?

    How long until the "ALARM_PL" shuts off?

5.   Explain the overall operation of this program segment?

6.   Change the preset time for each timer to 500. How does this affect the operation of the program segment?

7.   Which timer controls the "On time" of the "ALARM_PL"?

    Which timer controls the "Off time" of the "ALARM_PL"?

8.   While the controller is running, and Selector Switch #5 is turned on, put a value of "-1" into the preset of Timer 1.

    How does the controller respond?

    Recover the controller and get it back to normal operation.

9.   Explain what happened when the -1 value was put into the timer preset.

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