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# **PlantScape Process Operations**

## **Lesson 1**

# **Operating Sequential Control Strategies**

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### ***Notes***

#### **Introduction**

The purpose of this Lesson is to give you the knowledge to be able to operate SCMs in Station, and optionally in Control Builder. Upon completion of this Lesson you will have operated the SCM\_TEMP.

#### **Objectives**

- ❶ Control the SCM\_TEMP in Station
- ❷ Reset the SCM\_TEMP
- ❸ Control the SCM\_TEMP in Control Builder (Optional)



➤SCM States

- SCMs use State descriptors to indicate the current operational status.

State		Description
3 Most Common States	IDLE	SCM is ready to begin execution of its main logic.
	INACTIVE	SCM Block EXECSTATE is INACTIVE; block configuration parameters are being edited. This is the first step after IDLE.
	VALIDATED	SCM Block EXECSTATE is Active.
	RUNNING	SCM is executing its Main Handler.
	ABORTED	SCM has just executed its Abort Handler.
	HELD	SCM is not executing Main or Interrupt Handlers but is waiting for a Stop or Abort.
	STOPPED	SCM is not executing Main, Interrupt, Hold, or Stop Handlers and it is waiting for an Abort, Hold, or Restart command.
	COMPLETE	SCM is finished.
	INTERRUPTING	SCM is executing its Interrupt Handler.

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Notes

SCM States

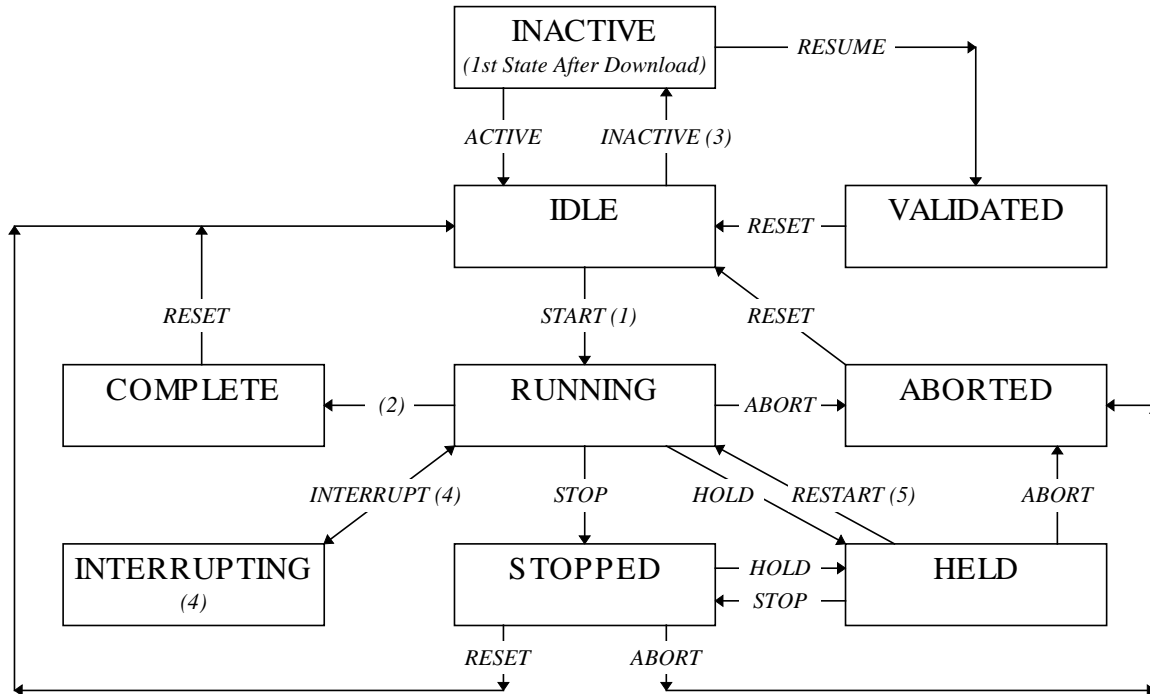


For a full description of all the SCM States and how an SCM transitions from one to another, see *Control Builder Components Theory, Sequential Control*.

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➤ **SCM Commands**

- SCMs commands (Shown in the arrows) cause the various states.



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**Notes**

**SCM Commands**

Page two of the SCM Detail Display shows this State/Command diagram. It is designed to guide you through the operation of the SCM.

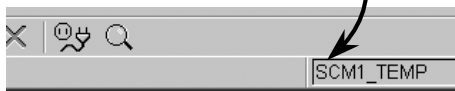
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### ➤ Opening an SCM Detail Display from Station

- Click on the Command Zone
- Type the name of your object, SCM#\_TEMP.



**Do not press Enter**



- Click the magnifying glass icon (or use <F8>).
- Operate your SCM
  - Click CMD and select Start
  - Call up Group #2 and watch the SCM control the temperature cascade
  - When the SCM goes to complete, issue a Reset command
  - At Idle you can issue a Start command to run again
  - Click on the Chart page of the Detail to view the SCM Code

SCM1_TEMP TEMPERATURE CTRL SCM	
Active Handler	
CHECK	
Handler Type	
Active Step	
0	
Time in Step (cyc)	
ST	IDLE
EXEC STS	OK
CMD	NONE
MD	AUTO
MD ATTR	PROGRAM

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## Notes

### SCM Detail Display

Operating from Control Builder is very useful, especially for troubleshooting and debugging, but for day-to-day operations you will use Station Detail displays and Custom Displays.



For more information on how to operate from Station refer to the *Operator's Guide, Getting Started*.



➤(Optional) Operate Your SCM from Control Builder

- Select SCM from the **Monitoring** tab. Right click, then select configure parameters.
- Click on the **Status** tab
- Notice the state is idle
- Click on the command pull down menu and select start
- Close the config parameters dialogue box
- Double click on the **SCM\_TEMP** in the **Monitoring** tab
- Notice the colors in the SCM These are visible in Station in the Chart tab of the SCM detail display
  - **Blue**            Completed Step or Transition
  - **Green**          Active Step or Transition
- Status should go to complete after the SCM is finished
- To run again, issue Reset (Status to idle) then issue the start command

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**Notes**

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**This completes....**

**PlantScape Process Operations**

**Lesson 1**

**Operating**

**Sequential Control Strategies**

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**Notes**