

## **Lab Exercise – Construction of Custom Change Zone (Optional)**

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This module supports **TotalPlant** Solution (TPS) system network.

TPS is the evolution of TDC 3000<sup>X</sup>.

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# Lab Exercise

## Objectives

After completing this optional concept lab exercise, you will be able to:

- Learn the usage of Actors and Scripts
- Build a Change Zone that can be used by an operator to manipulate and observe process changes

## Prerequisites

Before you begin this lab make sure that the following are met:

1. Must have the Native Window loaded on the Global User Station.
2. Must have the Display Builder running.
3. The HOPC indicator must be green which indicates that a valid connection has been made.

## Introduction

The Change Zone must allow an operator to observe and change the following:

Set Point (SP)

Process Variable (PV)

Output (OP)

Mode (Mode) -- display appropriate mode parameters for different point types

## Operation of the Change Zone:

1. The Operator selects a point by touching a target on a display.
2. The Change Zone is presented at the bottom of the display or any other position you may deem appropriate. The Change Zone shows the name of the point, the description of the point and the values for each of the above-mentioned parameters.
3. To change any of the numeric parameters (e.g., SP, PV, or OP), the operator first selects the parameter. After selection, an entry box appears and he/she types the new value in; when the "Enter" key is pressed, the parameter value is changed. For changing the Mode Parameter, the operator first selects the

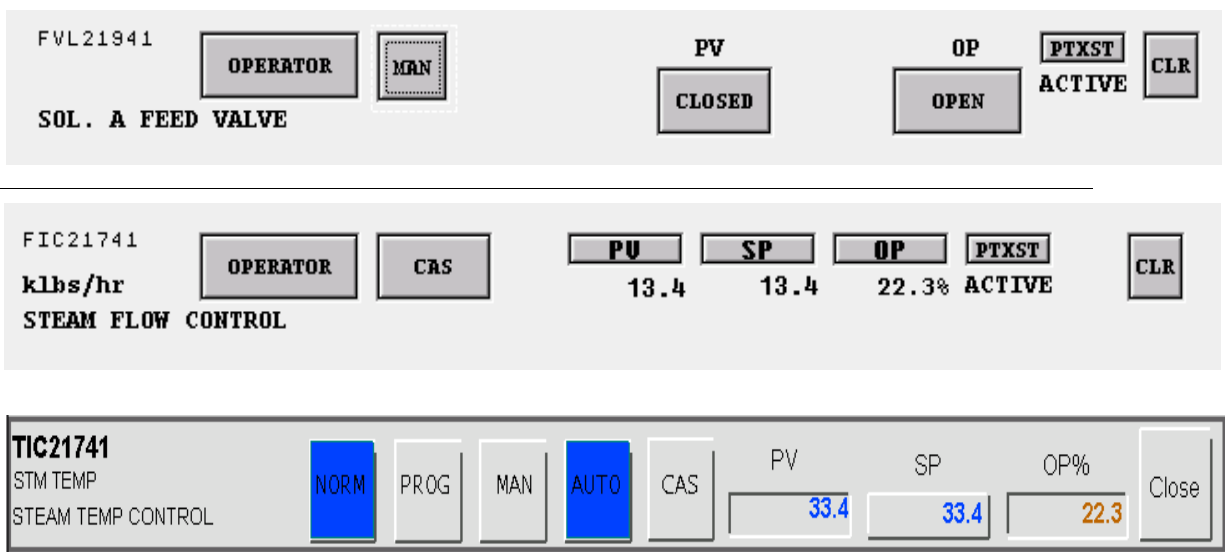
current mode indication. Targets appear that represent available selections for the Mode parameter (i.e. Manual, Auto, or Cascade). Following selection of the new mode, an EXECUTE target appears. When this target is touched, the selected value is stored into the Mode parameter.

4. The Change Zone is to contain a target that will allow the operator to call up the detail display for the selected point.
5. After a point has been selected on the graphic and the Change Zone for that point is displayed, the Change Zone is to remain on the screen. If a subsequent point is selected, the Change Zone is updated to reflect the new point.
6. The Change Zone is to contain a target that will allow the operator to remove it from display.

### Designing the Change Zone

1. The first step in designing your change zone is to determine what it will look like. Most users have used and seen a standard change zone.

The following are examples of change zones:



2. After you have sketched your model on paper, launch the Display Builder and start building your change zone.
3. The size of your custom change zone should be similar to the standard change zone so that either the standard or your custom change zone may be used in the same location in your class project.

4. Open a new Reactor.pct from the Library folder and save this in your Student folder as a new .pct file called Custom\_Zone.pct . Insert your custom change zone into the Custom\_Zone display. If you wish, you may use any of the valve subpictures located in the Library folder to access and test your custom change zone (or you may create your own valves.) After you have tested your change zone, validate and save your display.

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*Hint: To assist you in developing your custom change zone, use the class notes as well as the sample change zones in your Library folder (Changezone\_RC.pct for regulatory control points, Changezone\_DC.pct for digital composite points, and ChangeZone\_ModeButton.pct).*

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**End of Lab**

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