Changing the Mechanical Action of a Boolean Object

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LabVIEW 8.2 Help
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Boolean controls have six types of mechanical action that allow you to customize Boolean objects to create front panels that more closely resemble the behavior of physical instruments.

Complete the following steps to change the mechanical action of a Boolean control.

1. Place a Boolean control on the front panel.
2. Right-click the Boolean control and select **Properties** from the shortcut menu to display the Boolean Properties dialog box.
3. Click the **Operation** tab of the **Boolean Properties** dialog box.
4. Select a button behavior appropriate to the application from the **Button behavior** list. An explanation of the behavior appears in the **Behavior Explanation** section, and you can test the selected behavior in the **Preview Selected Behavior** section.

   In the icons that appear in the **Behavior Explanation** section, `M` represents the motion of the mouse button when you operate the control, `V` represents the output value of the control, and `RD` represents the point in time the VI reads the control.

   You can select from the following button behaviors:

   Switch when pressed—Changes the control value each time you click it with the Operating tool, similar to a light switch. This behavior is not affected by how often the VI reads the control.

   Switch when released—Changes the control value only after you release the mouse button during a mouse click within the graphical boundary of the control. This behavior is not affected by how often the VI reads the control.

   Switch until released—Changes the control value when you click it and retains the new value until you release the mouse button. At this time, the control reverts to its default value, similar to the operation of a door buzzer. This behavior is not affected by how often the VI reads the control. You cannot select this behavior for a radio buttons control.

   Latch when pressed—Changes the control value when you click it and retains the new value until the VI reads it once. At this point, the control reverts to its default value even if you keep pressing the mouse button. This behavior is similar to a circuit breaker and is useful for stopping a While Loop or for getting the VI to perform an action only once each time you set the control. You cannot select this behavior for a radio buttons control.

   Latch when released—Changes the control value only after you release the mouse button within the graphical boundary of the control. When the VI reads it once, the control reverts to its default value. This behavior works in the same manner as dialog box buttons and system buttons. You cannot select this behavior for a radio buttons control.

   Latch until released—Changes the control value when you click it and retains the value until the VI reads it once or you release the mouse button, depending on which one occurs last. You cannot select this behavior for a radio buttons control.

Note You cannot use any latch action for objects with a local variable because the first local variable to read a Boolean control with latch action resets its value to the default.

Refer to the Mechanical Action of Booleans VI in the `labview\examples\general\controls\booleans.llb` for an example of Boolean control mechanical actions.

Resources

LabVIEW Custom Controls, Indicators, and Type Definitions - NI Developer Zone
Changing the Face of Design Patterns with LabVIEW 7 Express Event Structure - NI Developer Zone
Adding Custom Commands to the LabVIEW Operator Interface - NI Developer Zone

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