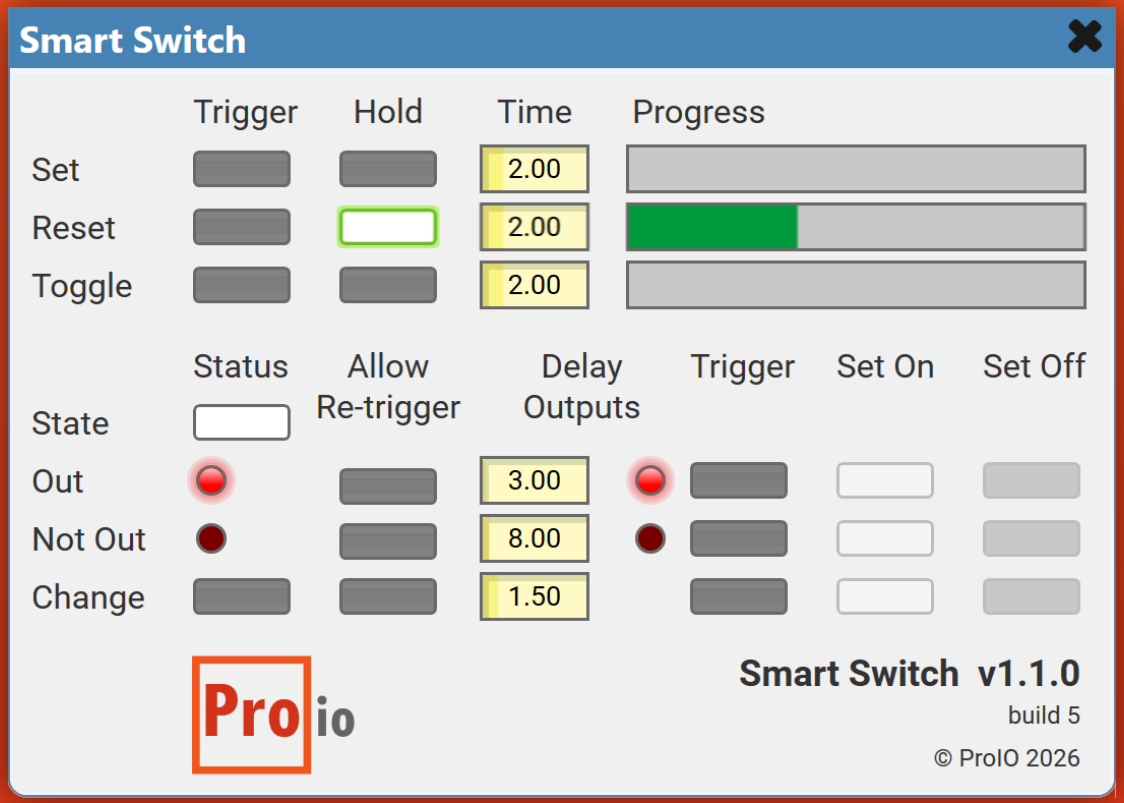
Plugin Reference

Smart Switch

June 15, 2026

v1.1.0



Pro io

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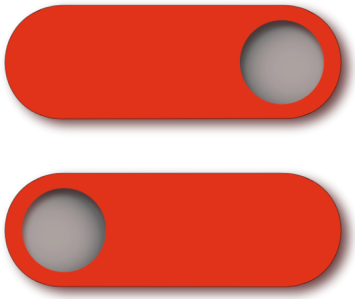
Introduction

Smart Switch is an upgrade to the stock Flip-Flop component that proves itself to be invaluable for simplified control over third party devices. Unlike the traditional Flip-Flop, the Smart Switch features the ability to set toggle states on linked controls to both on and off in both directions.

The Smart Switch also features press and hold buttons that can be directly mapped to User Control Interfaces. A meter displays the elapsed progress in the holding duration. This is ideal for situations where accidental touches could have profound impacts to system readiness like muting all audio in a building or powering off devices.



An additional set of outputs can also manipulate linked controls any time the state of the Smart Switch changes, regardless of the direction. This is highly useful for returning controls to a default state anytime the component is turned on and turned off.

Another enhancement is the included output delays with discrete times for On, Off, and Change. This allows multiple Smart Switches to actuate together but manipulate any linked controls in a particular timed sequence.

Concepts

State

Smart Switch is centered around a single toggle button and the idea that the switch (or button) can either be On or Off. While the State toggle button can be changed directly by either clicking it or using control pin wiring, the Smart Switch provides many other features for changing the State and ganging logical control functions based on the State and the transition from one state to another.

Set, Reset

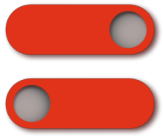
To cause a transition of the Smart Switch from one state to another, the Output should either be "Set" or "Reset". Set means that the State will become true. Reset means the State will become false.

Toggle

The set of Toggle labeled controls will cause the Smart Switch to transition to the opposite state. This is very similar in logic to how a television remote's power button works.

Out, Not Out

Smart Switch uses the terms "Out" and "Not Out" as the primary outputs of the plugin. The "Out" is a positive logic state where true means On and false means Off. The Not Out is the opposite of the Out state. Since most controls in Q-SYS activate with a transition from false to true, the Not Out can be useful when an external device should power off when the Smart Switch changes from a logical "On" to "Off" state, for example.



Concepts

Change

Controls that are named with the word "Change" mean they are actuated any time the Smart Switch changes states. This is useful when certain actions should occur any time the Smart Switch changes, regardless of its state. For example, muting microphones, logging activity, or resetting mixer levels may be desired any time a room's power state changes, regardless if it is On or Off.

Hold

Rather than immediate state transitions from a trigger button, Smart Switch has built in press-and-hold functionality with user-definable hold times. This prevents accidental touches on a touchscreen from powering off devices, for example. A progress meter shows the elapsed duration of the momentary button which can provide visual feedback to users on the UCI.

Re-Triggering

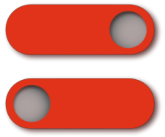
Once Smart Switch is in a particular state, it could be problematic for a user to repeatedly press the same state (or press and hold the momentary buttons). While this could be useful for some designs, it could cause unwanted problems in other cases. As such, Smart Switch offers a toggle button for "Allow Re-trigger" for each of the Out, Not Out, and Change sets of outputs. When the button is false, the set of outputs will only actuate one time in the current state. When the button is true, the outputs for the current state will re-actuate any time a user commands the same state. The Change set of outputs will accordingly only actuate when the state transitions from one state to another.

Delay Outputs

Each set of outputs for a particular state (or Change) is governed by a delay time. This is useful for providing a control delay between the activation of the Smart Switch to when the desired effect should occur. For example, this could be applied to powering down a system but waiting to turn the lights off for a few moments giving time for users to exit the venue. The Delay only applies to the controls shown to the right of the delay time. The State, Out, Not Out, and Changed (collectively, the Status controls) show the real-time, current state of Smart Switch.

Set On, Set Off Outputs

The Set On and Set Off outputs cannot be interacted with and are for output control pins only. These buttons can be wired to any toggle buttons in the design. When the associated state of Smart Switch is actuated, the toggle will either be set to "On" or to "Off" depending on which control pin is used. For example, the Output Change Set On control pin can be wired to a mute button so the mute will be engaged any time the Smart Switch changes states. The Set On pin will only ever cause booleans to become true. The Set Off pin will only ever cause booleans to become false.



Controls

Set Trigger
a trigger button that immediately transitions to the On state

Set Momentary
a momentary button that must be held for the duration set by Set Time before transitioning to the On state. While held, progress toward activation is shown on the Set Progress indicator. Releasing the momentary button will reset the progress meter.

Set Time
specifies the duration in seconds the Set Momentary button must be held before transition to the On state

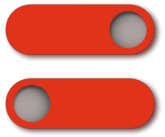
Set Progress
shows how long the Set Momentary button has been held. The state will change when the meter completely fills.

Reset Trigger
a trigger button that immediately transitions to the Off state

Reset Momentary
a momentary button that must be held for the duration set by Reset Time before transitioning to the Off state. While held, progress toward activation is shown on the Reset Progress indicator. Releasing the momentary button will reset the progress meter.

Reset Time
specifies the duration in seconds the Reset Momentary button must be held before transition to the Off state

Reset Progress
shows how long the Reset Momentary button has been held. The state will change when the meter completely fills.



Controls

Toggle Trigger
a trigger button that immediately transitions to the opposite state

Toggle Momentary
a momentary button that must be held for the duration set by Toggle Time before transitioning to the opposite state. While held, progress toward activation is shown on the Toggle Progress indicator. Releasing the momentary button will reset the progress meter.

Toggle Time
specifies the duration in seconds the Toggle Momentary button must be held before transition to the opposite state

Toggle Progress
shows how long the Toggle Momentary button has been held. The state will change when the meter completely fills.

Status State
a toggle button that indicates the current output state. This control can also be used directly to change the state.

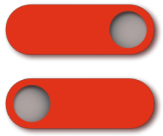
Status Out
an LED that illuminates immediately - without delay - when transitioning to the On state

Status Not Out
an LED that illuminates immediately - without delay - when transitioning to the Off state. This will always be the opposite of Status Out.

Status Changed
a trigger button that actuates immediately - without delay - whenever the state changes.

Note

All Status controls actuate immediately upon state change and are not affected by output delays.



Controls

Allow Retrigger Out

a toggle button the allows or bypasses all On-state related outputs to actuate again if the state is already On

Output Out Delay

a numerical knob that specifies the delay time, in seconds, that affects the set of On-state related controls

Output Out Indicator

an LED indicator that shows the On state after the Output Out Delay time

Output Out Trigger

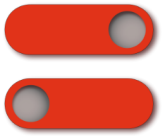
a trigger button that actuates after the Output Out Delay time

Output Out Set On

a read-only toggle button that will cause connected controls via control pin to be set to true, whenever the state is set to On, after the Output Out Delay time

Output Out Set Off

a read-only toggle button that will cause connected controls via control pin to be set to false, whenever the state is set to On, after the Output Out Delay time



Controls

Allow Retrigger Not Out

a toggle button the allows or bypasses all Off-state related outputs to actuate again if the state is already Off

Output Not Out Delay

a numerical knob that specifies the delay time, in seconds, that affects the set of Off-state related controls

Output Not Out Indicator

an LED indicator that shows the Off state after the Output Not Out Delay time

Output Not Out Trigger

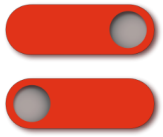
a trigger button that actuates after the Output Not Out Delay time

Output Not Out Set On

a read-only toggle button that will cause connected controls via control pin to be set to true, whenever the state is set to Off, after the Output Not Out Delay time

Output Not Out Set Off

a read-only toggle button that will cause connected controls via control pin to be set to false, whenever the state is set to Off, after the Output Not Out Delay time



Controls

Allow Retrigger Change

a toggle button the allows or bypasses all change output related controls to actuate again even if the state has not transitioned to a different state

Output Change Delay

a numerical knob that specifies the delay time, in seconds, that affects the set of change related controls

Output Change Trigger

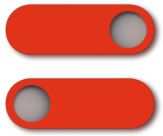
a trigger button that actuates after the Output Change Delay time

Output Change Set On

a read-only toggle button that will cause connected controls via control pin to be set to true, whenever the state changes or is re-triggered, after the Output Change Delay time

Output Change Set Off

a read-only toggle button that will cause connected controls via control pin to be set to false, whenever the state changes or is re-triggered, after the Output Change Delay time



Changelog

v1.1.0 – June 15, 2026

- Added Re-trigger function.

v1.0.0 – May 17, 2026

Original release