

Using Control Surfaces to Operate CS-Studio OPIs

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CS-Studio Display Builder

Knob Widget

Knob widgets allow to write in a PV and monitoring the current value.

Read-back value can be always visible, or displayed only when it differs from the knob one.

Knob value can be synced with the read-back one, so that the knob will be positioned at the read-back value.

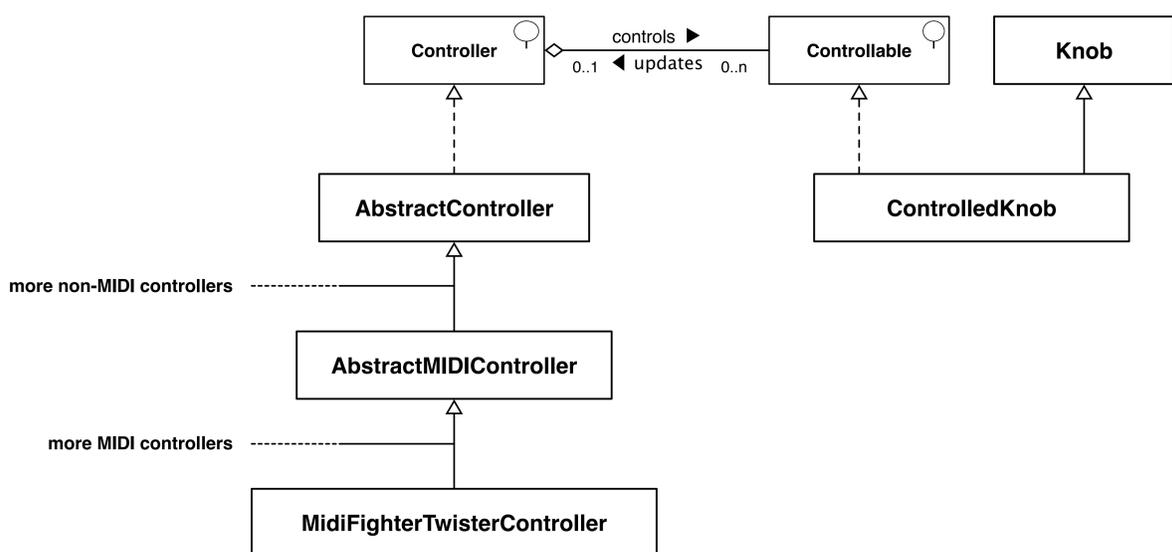
When dragged, Knob can write the new target value on mouse button release, or continuously.

Extrema (maximum and minimum values) can be hidden.

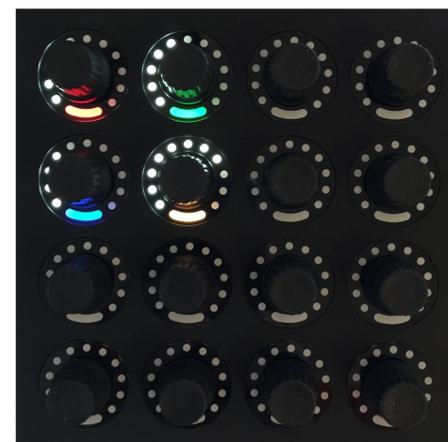
MIDI Fighter Twister

MIDI Protocol

- ### MIDI Fighter Twister programmed for:
- Use the 6 side buttons as depicted.
 - Initially have the tag LED black.
 - Have the 64 knobs (16 in 4 different banks) numbered from 0 to 63.
 - Have high resolution sensitivity for each knob.
 - Have the indicator blending the last LED according to the current value.
 - Send increment/decrement MIDI events each time a knob is rotated.
 - send pressed/released MIDI events each time a knob is pushed.



- ### Operating Mode
- **CONTINUOUS**
Rotating the knob will coarsely update the widget target and current values. Pressing and rotating the knob will do the same in fine increments/decrements.
 - **SET_AND_CLICK**
Rotating the knob will coarsely change the widget target value. Clicking (pressing and suddenly releasing) the knob will force the update of the widget current value. Pressing and rotating the knob will do the same in fine increments/decrements. A further click will trigger the update of the widget current value.
 - **CLICK_SET_AND_RELEASE**
Rotating the knob will do nothing. Pressing and rotating the knob will coarsely change the widget target value. Releasing the knob will trigger the update of the widget current value.



<https://github.com/ESSICS/Controlled-KNOBS>