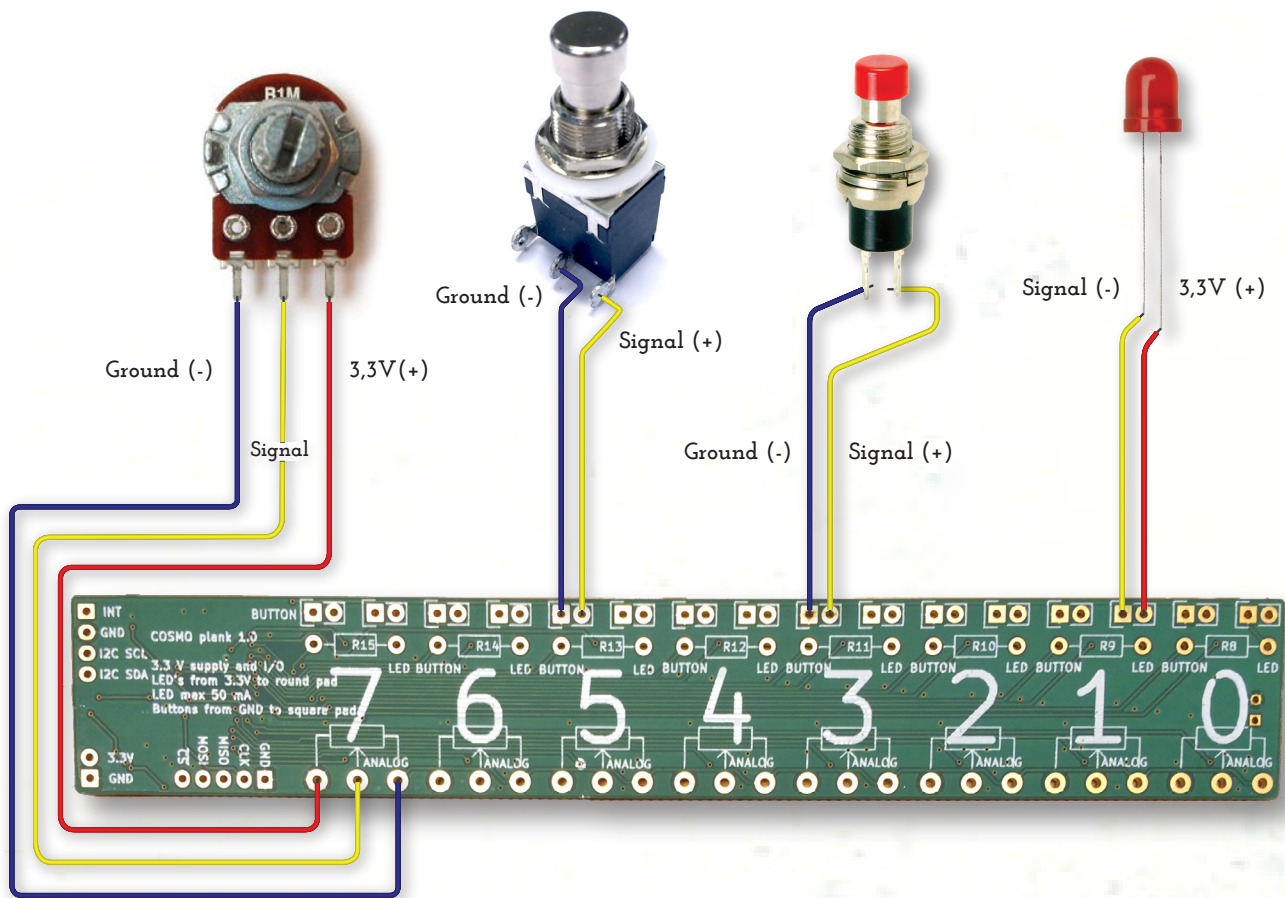


How to wire pots, LEDs & switches



Switches

A switch is basically a mechanical device that creates a break in a circuit. When you activate the switch, it opens or closes the circuit. Switches can be either momentary, which opens or closes the circuit when held down, or toggle, which closes one circuit and opens another one when pressed. For the momentary switch, it doesn't matter which of the pins are used for signal (+) and ground (-), and for the toggle switch, the ground (-) should be middle, but signal (+) can be either left or right.

LEDs

LED stands for light emitting diode. It is basically a special type of diode that lights up when electricity passes through it. Like all diodes, the LED is polarized and electricity is only intended to pass through in one direction. The short leg on a LED needs to be connected to negative (signal) and the long leg needs to be connected to positive (3,3V)

Potentiometers

Potentiometers are variable resistors. They have three legs to create a voltage divider, which is basically two resistors in series. When two resistors are put in series, the point between them is a voltage that is a value somewhere between the source value and ground. The middle pin of the potentiometer needs to be connected to the middle input of the COSMO plank, while ground (left plank socket) and 3,3V (right plank socket) can be connected to either side of the potentiometer.