Switches

Nearly all electronic devices use mechanical switches.

Simple idea: make or break contact between two wires:

\[ A \rightarrow \overline{\beta} \] open, no connection from A to B
\[ A \rightarrow \beta \] closed, A and B connected by wire

But a variety of configurations

Special terminology to describe:

\# of poles = \# of different switches controlled together

Example:

\[ A \rightarrow \beta \] = two poles
\[ C \rightarrow \beta \] = two poles

Single switch actuator simultaneously controls A/B and C/D

\# of throws = \# of connections each individual switch can make

Example:

Single throw

Double throw

Triple throw
Combine these and abbreviate:

SPST = single pole, single throw
SPDT = single pole, double throw
DPDT = double pole, double throw
SPST = single pole, 1 throw

Generally npmt, use s for 1 and d for 2

Many kinds of actuators: lever, button, rocker, knob...

Momentary switch: normally open or normally closed changes when you hold actuator goes back when you release

Our project uses:

SPDT: set gain
SPDT: select battery/external power
SPST (mom): battery check