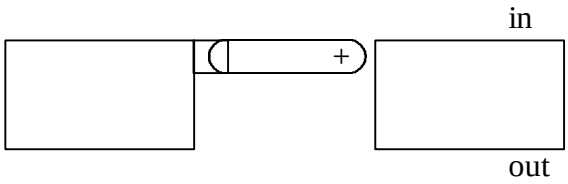
Week 11 Review

What was covered:

- Voltage gated ion channel
- Gating currents
- Model for Sodium and Potassium channel
- State model

Voltage gated channel



- Probabilistic gate. Probability that gate is open depends on voltage across membrane.

Gating currents

The gate has charge on it. (Remember: charge on gate is why probably of being open changes with voltage.)
Therefore, the movement of the gate opening and closing causes a current. That is called the gating current.

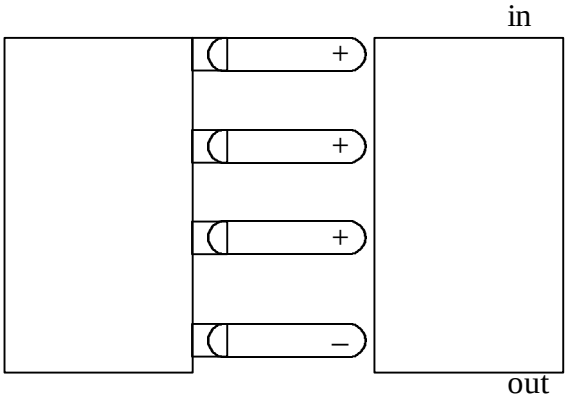
What about Sodium and Potassium channels?

Sodium and Potassium channels can't just be modeled as one gate because

- Sodium channel has inactivation as well as activation
- Potassium channel has S-shape onset not exponential

Use 4 gates to model single channel!

Sodium:



Potassium: