



dSwitch User Guide V 1.0



What is dSwitch?

The dSwitch is a controller designed to be used with Lego NXT Mindstorms hardware and software. The dSwitch controls appliances in your house or anything else you can plug into a standard electrical socket.



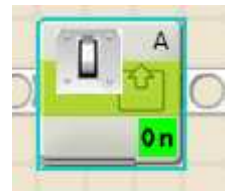
Use

To use the dSwitch, simply plug the power chord into any socket of appropriate voltage and appropriately grounded. Plug the electrical equipment to be controlled, such as a light, small motor, or other appliance into the socket on the dSwitch (see below on amperage limitations). Connect the dSwitch to any motor port on the Smartbrick with a standard NXT cable.

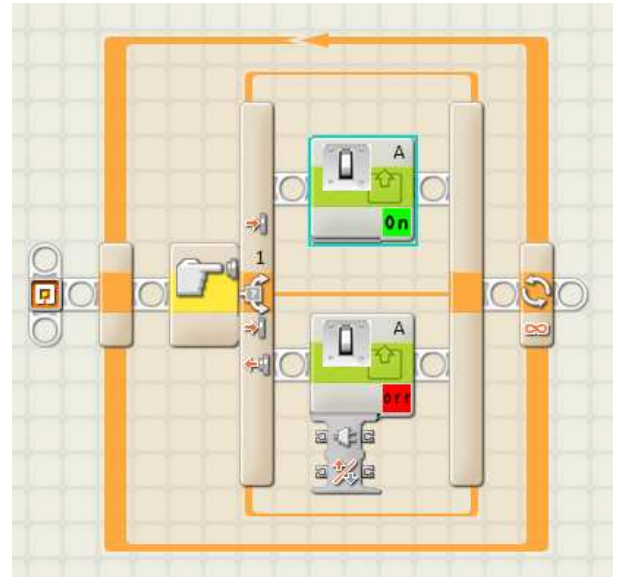
Download the dSwitch brick from <http://dexterindustries.com/Products-dSwitch.html>. Save and unzip the file into a directory titled "dSwitch". Import the brick into Mindstorms NXT on your computer. The Brick drags and drops like any other brick, and has an "On" and "Off" setting. The dSwitch will remain in the last On/Off state

until it is changed, the dSwitch is disconnected, or the NXT Smartbrick loses power.

The NXT-G block is shown to the above-right, and the control block is shown above. Both are turning the dSwitch "On", connected to the "A" port.

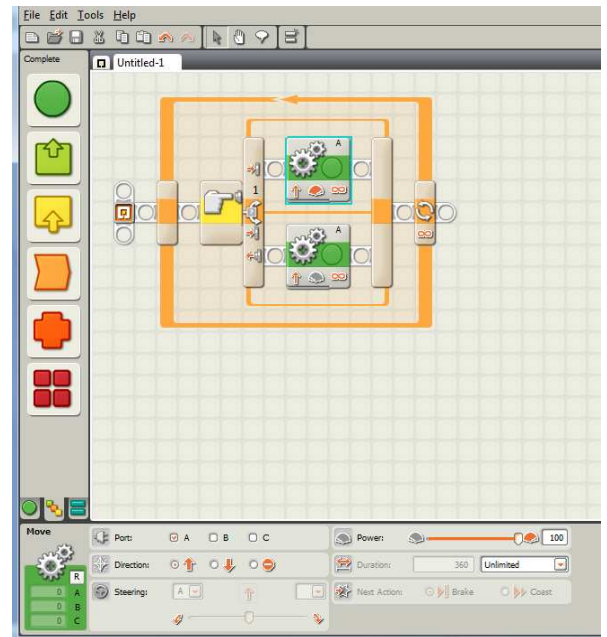


A sample program is shown to the right. The sample program controls a compact fluorescent light, turning the light on when the touch sensor is pressed, and off when the touch sensor is released. The dSwitch is connected with a cable to motor port A on the smart brick.



The dSwitch can be controlled with a motor NXT-G block. This method is the most memory-efficient. By setting power to 100%, you turn the switch on. By setting the power to 0%, you turn the switch off. The “Duration” of the motor block should be set to “Unlimited”.

The same program, using the motor block in place of the dSwitch block.



Safety

110V Model (USA, Canada, Mexico, Taiwan). The dSwitch is designed for a maximum safe load of 10 Amps at 110/120 volts. *Ensure that the total load of all appliances hooked to the dSwitch do not exceed 10 Amps.* For safety, the dSwitch includes a 10 Amp fuse, which when the maximum load is exceeded, will turn off the dSwitch.

250V Model (UK, Europe, Switzerland). The dSwitch is designed for a maximum safe load of 5 Amps at 220/250 volts. *Ensure that the total load of all appliances hooked to the dSwitch do not exceed 5 Amps.* For safety, the dSwitch includes a 5 Amp fuse, which when the maximum load is exceeded, will turn off the dSwitch.

If the fuse is blown, it must be replaced for the dSwitch to operate. For information on replacing the fuse, contact us at info@dexterindustries.com.

For safe operation, ensure that the dSwitch is always placed in a grounded, 3 prong wall socket.