V2.0 Brainboard
Prototyping Add-on
for the Solarbotics SUMOVORE

Build Time: 30mins
Skill Level: Beginner (1/5)

Time for some custom upgrades to your Version 2 Brainboard? Plug in the Prototyping Breadboard!

No space for your laser-guided minisumo cannon*?
Mount it on the Prototype Breadboard!

This breadboard has:
- Three Servo Headers
- Raw 6V Access
- Regulated 5V Access
- Transistor, RJ11, and IC footprints
- I²C taps to supporting Brainboards

*If you develop one, let us know!
We strongly suggest you inventory the parts in your kit to make sure you have all the parts listed. There aren't many in this kit, so take 5 seconds and do it. Use a pen, pencil, pricked finger, chocolate bar - anything to mark off the items. If anything is missing, contact us for replacement parts information.

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ATMega8 Brainboard Components
1 - Printed Circuit Board (PCB)
1 - 5-Pin Low-profile Pin Strip for Brainboard connection
1 - 11-Pin Low-profile Pin Strip for Brainboard connection

Tools Required
Soldering equipment

You may think it’s all easy - just solder in the two pins into the “Expansion 1” and “Expansion 2” ports. Yup, almost!

Solder the LONG pin to the PCB. The short side of the pins is what mates to the low-profile sockets on the Brainboard. But, if you mess it up and solder in the short end, it’s not that big of a deal!

You’ll notice there are a few mounting holes on the PCB. These line up with the pads on the Sumovore if you need to add hard-supports to “lock-down” the breadboard.

C1 and C2 are connected to the regulated 5V line for circuit voltage stabilization. We recommend a 330µF 6.3V (or greater) be installed with a 0.1~0.22µF capacitor for C2. An R1 value of 1k controls the base of the “NPN” transistor, which in turn toggles the unregulated 6V power to the servo headers.

The RJ11 header has holes ported out next to it for... whatever you may want of it!