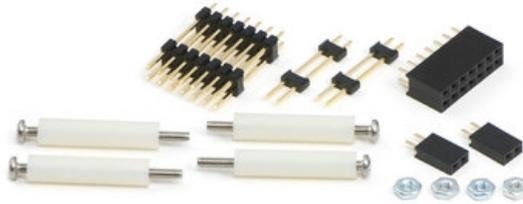




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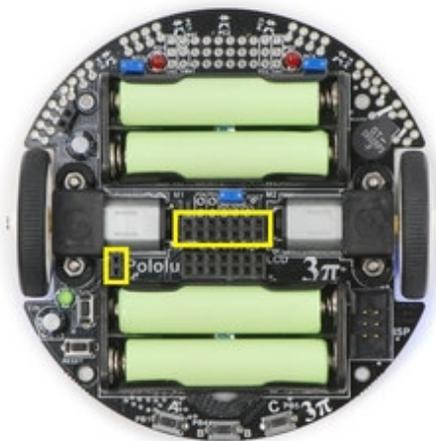
RB-Pol-79: 3pi Expansion Kit with Cutouts - Black

The supplied header pins allow you to establish all of the necessary electrical connections between the expansion PCB and the 3pi base. This kit includes a round printed circuit board (PCB) with holes spaced on a 0.100" grid, one extended 2×7 male header, two extended 2×1 male headers, a 2×7 female header, two 2×1 female headers, four 7/8" nylon spacers, four 1-1/4" screws, and four nuts.



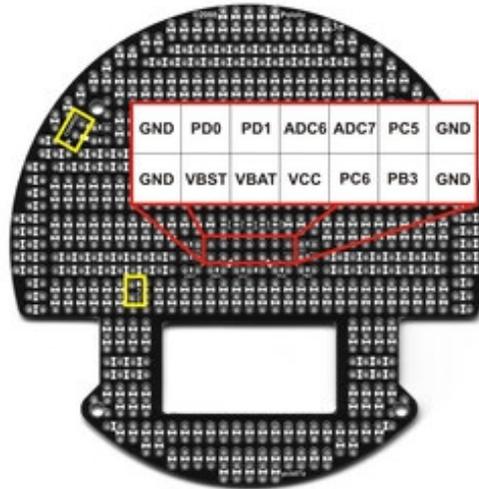
We recommend that you fully assemble the 3pi and its expansion kit before you solder anything. This will ensure that once everything is soldered in, the expansion platform will align properly with the base. We suggest that you assemble your expansion kit in the following order:

- 1) Place the 2×7 female header and one of the 2×1 female headers into the proper holes in the 3pi base as shown below (see the yellow rectangles).



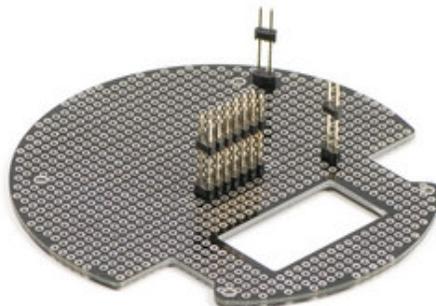
**Pololu 3pi robot with expansion kit female headers marked by yellow rectangles.**

- 2) Insert the long ends of the 2×7 and one 2×1 extended male header into these female headers. Additionally, insert an extended 2×1 male header into the battery charge port. Place the expansion PCB so the tops of these male headers seat in the proper places, as marked by the rectangles in the picture below. Note that the expansion PCB mounts with the silkscreen facing up.



**Solder connections for male headers on the 3pi expansion kit with cutouts.**

- 3) Slip a nylon spacer between the base and the expansion PCB so that it lines up with the mounting hole on the base. Insert a screw from the underside of the base up through the base's mounting hole, the spacer, and the mounting hole on the expansion board. Holding the head of the screw against the base, twist the nut onto the other side, but don't tighten it all the way. Repeat this process for the three remaining screws, and then tighten them together so that the expansion PCB is aligned well with the base.
- 4) With the screws holding everything in place, you can now solder the female headers to the base and the male headers to the expansion PCB. Once everything is soldered in, you can remove the screws and pull the expansion PCB off of the base; it should look like the one in the picture below.



### Bottom view of 3pi expansion

- 5) After assembly you will have a single 2×1 female header left over. You can use this to create your own battery charge port on the expansion PCB.

