

Additional whiskers can be added to ARobot's body to help aid navigation and object detection. This kit will provide you with the hardware for 2 additional whiskers.

Note:

This add-on whisker package requires drilling, soldering, and programming. Don't attempt this if your skill level is not adequate. Refer to the ARobot user guide for details about whiskers, schematics, wiring, and programming.

Drilling Holes

Each whisker requires 2 mounting holes - a .175" diameter hole for the shoulder washer and L bracket, and a .150" hole for the spacer. The holes should be about 3/4" to 1" apart. You'll find 2 sets of whisker mounting holes on the rear of the ARobot body but you can drill new ones anywhere you want. The large hole that accepts the shoulder washer and L bracket should be about 3/8" away from the edge of the robot's body.

Mounting the Hardware

Make sure to scratch off paint around the small spacer mounting hole. The robot's body is ground (0 volts) supplied by the body cable and is used to electrically connect to the whiskers through the whisker spacers. Mount the whisker hardware like the drawing. Pay special attention to the plastic insulating washers. These L brackets **MUST NOT** make electrical connection to the body. Make a small loop in the end of the whisker wire so it can be mounted to the spacer. Slide the whisker wire through the L bracket hole and mount the wire's loop to the spacer using a 4-40 x 3/16 screw. When done, bend the whisker so that it rests in the center of the bracket hole. If you have a multi-meter, you can test to make sure there is continuity between the robot body and the whisker wires, and test to insure there is NOT continuity between the L bracket and the robot body. Bend and trim the whisker wire to meet your needs. Making a small loop in the end will prevent poking people.

Wiring

There will be one wire soldered to each L bracket. Use 24, 26 or 28 awg stranded wire. Strip and tin the wire with a coating of solder. Tin a small place on the L brackets bend area with solder. (see ARobot's front whiskers as an example). Attach the wire to the L bracket with a soldering iron. When done and cool, scrape away any flux residue with a knife. Residue can prevent the whisker wire from making contact with the bracket. The body cable has 2 unused pins that are routed to the Basic Stamp II which can be attached to the 2 new whiskers. Or you can wire the new whiskers through the expansion port. It's also possible to wire the 2 whiskers in parallel so they will consume only one signal. See the schematic of the controller board in the user guide for details about wiring.

Programming

If wired to unused pins on the Basic Stamp II, reading the new whiskers is the same as reading the existing front whiskers - only the pins will be different. See ARobot's user guide for programming examples.

Whisker Mounting Detail

