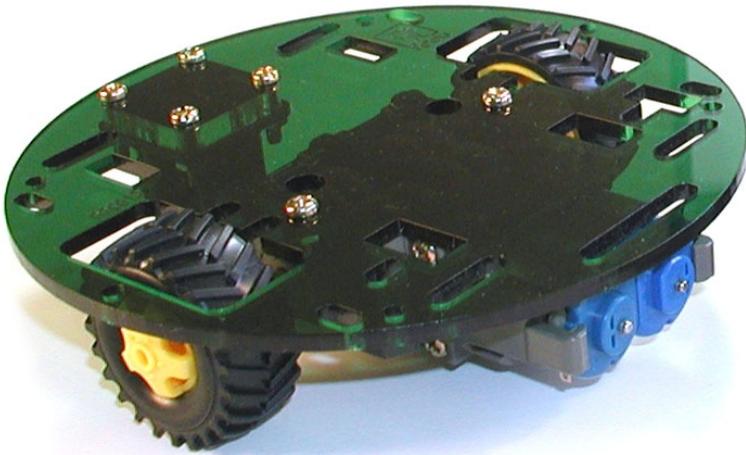




Round Robot Chassis

User's Guide



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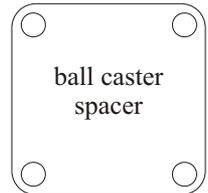


Parts List

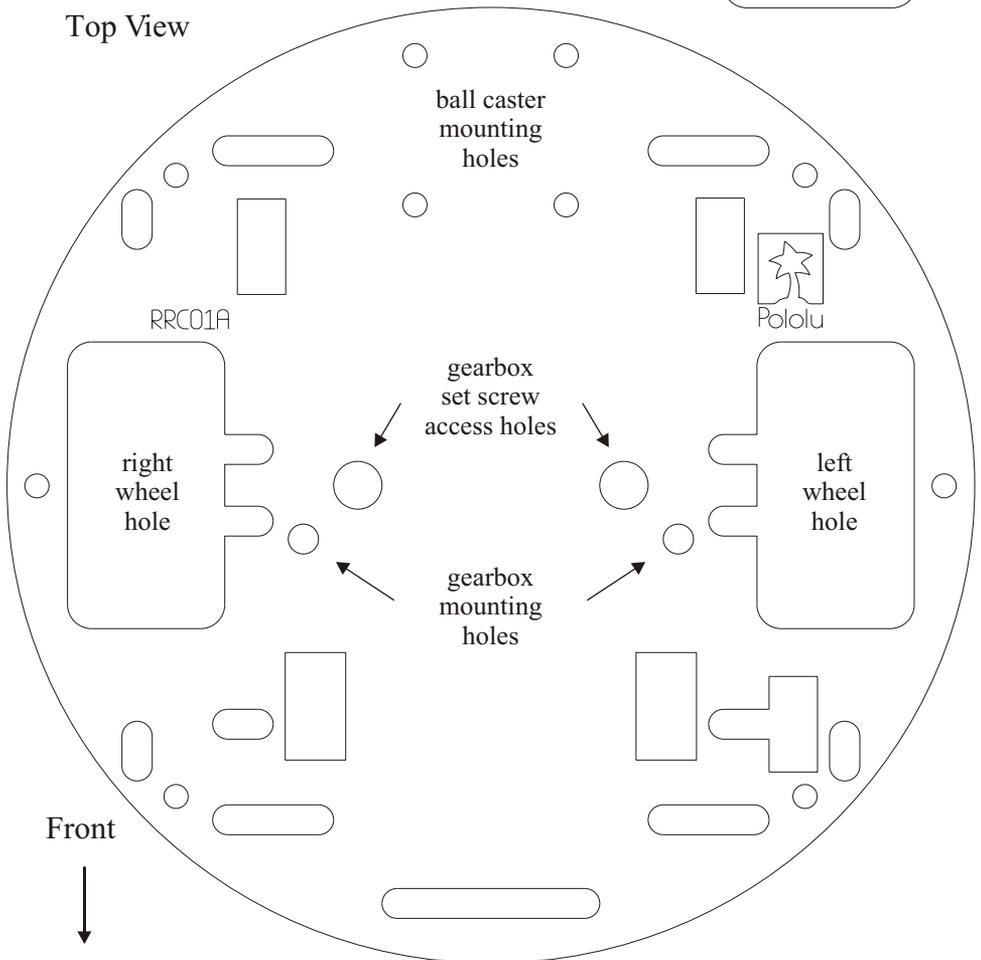
Included in this kit are a round chassis plate and a square spacer with four holes (shown below). To build your robot, you will also need the Tamiya twin-motor gearbox (70097), ball caster (70144), and truck tires (70101) kits that are packaged separately.

Chassis Drawing

The following is an actual-size drawing of the chassis. Many holes and cutouts do not have a specific purpose, and you can easily add your own holes to customize your robot.



Top View



Contacting Pololu

You can check the Pololu web site at <http://www.pololu.com/> for latest information about the robot chassis, including color pictures, robot examples, and troubleshooting tips.

We would be delighted to hear from you about your project and about your experience with our robot chassis. You can contact us through our online feedback form or by email at support@pololu.com. Tell us what we did well, what we could improve, what you would like to see in the future, or anything else you would like to say!

Assembly Instructions

Before you begin, you should remove the protective paper from the acrylic parts. If you know about any modifications you want to make ahead of time, you should make additional cuts and drill holes before removing the paper.

1. Assemble the dual gearbox using the instructions provided with that kit. Build the gearbox in the 'C' configuration, which provides a low-speed gear ratio.
2. Put wheels on the gearbox axles and mount the gearbox to the chassis plate using two 3x10mm screws and 3mm nuts that come with the gearbox kit. Make sure the gearbox is aligned properly with the chassis.
3. Assemble the ball caster using the instructions provided with that kit. Make the caster in the 25mm height configuration.
4. Use four 3x15mm screws and 3mm nuts to mount the ball caster and spacer to the main chassis plate. The spacer is not strictly necessary, but it makes the chassis parallel to the ground, which is usually desirable.

Now, you are ready to customize your robot! Add a control system, sensors, and a battery to bring your robot to life. Because the front of the robot is weighed down by motors, you should position the battery above the ball caster to make sure the ball caster stays on the ground.



The Pololu Round Robot Chassis

The Pololu Round Robot Chassis is a small, low-cost mobile platform for experimenting with robotics. With this kit, you can assemble a differential-drive robot with independent gearboxes for the right and left wheels, allowing for very precise motion control. Because the chassis is perfectly round and the wheels are on a diameter of the circular robot, it can turn in place without getting stuck.

The chassis plate has many holes for mounting sensors and electronics, and the acrylic can readily be modified to meet your needs. The chassis is very low to the ground, allowing you to add plenty of electronics and sensors to the robot without worrying about it tipping over.

Note: This kit requires the Tamiya twin-motor gearbox (70097), ball caster (70144), and truck tires (70101) kits that are packaged separately. You will also need your own electronics circuitry to build a complete robot.

Specifications

Chassis size.....	5" (127 mm) circle
Wheels and motors.....	2
Drive type.....	Differential drive
Gear ratio.....	203:1
Wheel size.....	1.42" (36 mm)
Recommended motor voltage.....	3-6 V
Weight (approximate).....	5 oz. (140 g)

