2018 Edition

Open Rover

Quick Start Guide
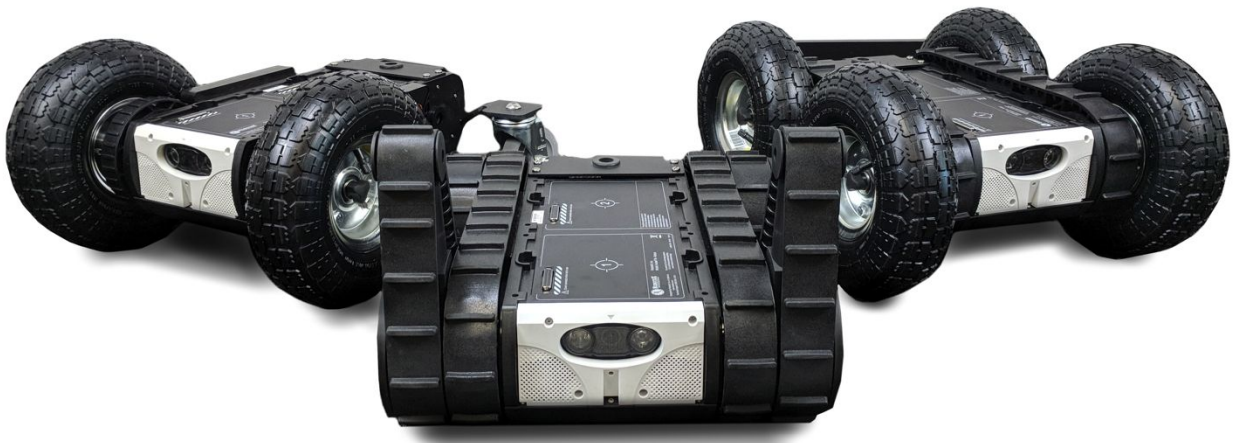
ROVER
ROBOTICS

ROVER ROBOTICS

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Safety Information

⚠️ Read this manual carefully before operating the Open Rover. ⚠️

- Carefully inspect the Open Rover before each use.

- Ensure that all parts are secured in place and properly installed.

- Do not place fingers in between the wheel, tracks or flippers when the unit is powered on. Keep fingers and other body parts away from moving parts at all times.

- Care should be taken when running the Open Rover near pedestrians, small children, or objects that can be harmed. Be aware of your and the robot's surroundings at all times.

- AC Adapter Handling:
  - Use **only** the supplied AC adapter. Do **not** use any other unauthorized AC adapters. Damage to robot and battery may occur from use of alternate AC adapters.

- FCC Caution: This equipment generates and uses radio frequency energy and may cause interference to external reception if not installed and used properly in strict accordance with the manufacturer's instructions.

- Before switching payloads/accessories on the robot, make sure the battery is unplugged and the unit is powered down.

Basic Setup

1) Pre-Use Setup

A) *Installing the Battery*
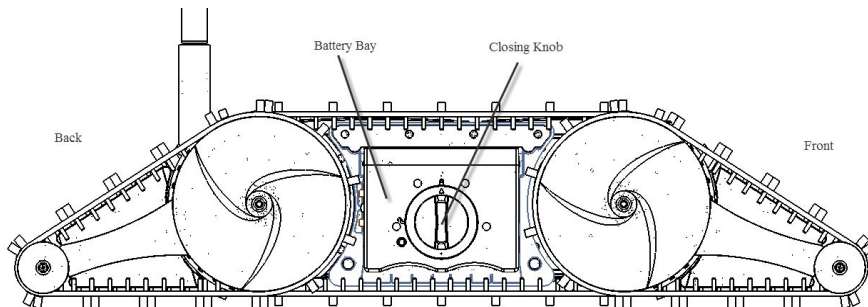
1) The battery bay is located on the side of the robot. To open the battery bay, grip the "Closing Knob" and push in, turning the knob in counter-clockwise direction. You should feel a slight "pop" or "click," indicating the door is open. Pull the latch outward and pull out the battery ejector bar to open the battery bay.

2) To install the robot battery, line up the connectors on the battery with the slots inside the battery bay. Next, gently slide the battery into the bay. A properly installed battery will slide entirely into the robot – if any part of the battery is sticking out, remove battery, check alignment of connector and reinsert.

3) Close the battery bay door by returning the door to its closed position, making sure the folding bar is folded over the battery and the upper lip of the battery door tucks underneath the top strip of the battery bay. Shut the latch and turn the "Closing Knob" clockwise. You should feel a "pop" or click" when the battery door has closed.

When closing the battery door, make sure the lip at the top strip of the battery door tucks underneath the top of the battery bay.

B) Powering On the Robot

Robot

There is a red power button on the fan side of the robot's main chassis, opposite of the battery door.

Power On:

Insert the battery into the robot, or if the robot is in sleep mode, hold down the power button for 2-3 seconds and release. Notice that the green LED illuminates on the Payload USB/Serial Breakout Board.

Power Off:

Hold down the power button for 2-3 seconds and release. Wait a few seconds for system to power down. Notice the green LED will go off on the Payload USB/Serial Breakout Board. The robot is also powered off whenever the battery is removed.

Sleep Mode:

The battery may be stored in the robot and the robot remains powered off. To do this, press the red power button and hold continuously while inserting the battery until the battery door is closed. Then release the button. If the fans didn't turn on, the robot is powered off and in sleep mode.

C) Installing the Wheels or Flippers

Before driving the robot, please make sure that the robot's wheels or flippers are installed.

Wheels:
Large drive wheels slide onto the hubs and connect to the black drive tubes via splines. The same splines engage on the other end of the drive tube with the robot's output pulley. Slide the wheels on until they bottom out after engaging with the drive tubes.
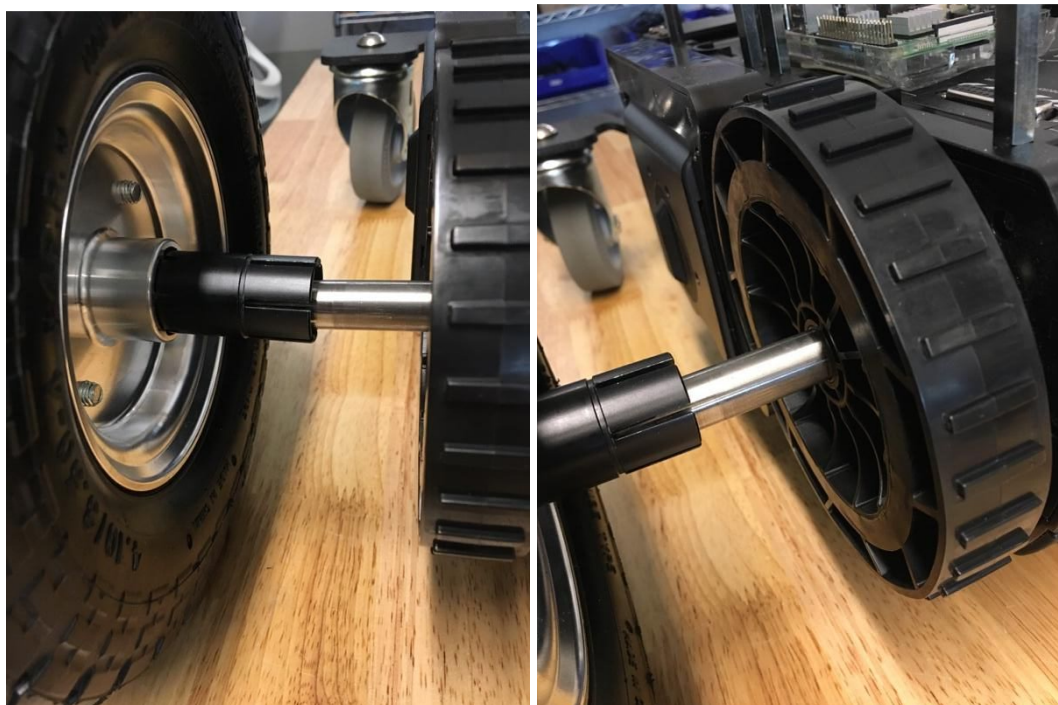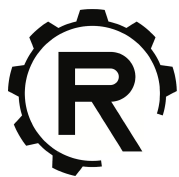
Next install the wheel washer plus M5 locknut for the opposite side of the battery door,and wheel washer plus M5 thumb nut for the battery door side of the robot.

Caster Wheel Assembly:

Install the caster wheel bracket assembly using included M4 by 12mm screws and a flat screwdriver. Apply mild-medium thread locking compound if needed.

Flippers:

Flippers install the same way as wheels, but they also have a secondary engagement on the inner shaft. Slide the flippers all the way on and engage both the inner shaft and the drive tube. Rotate the flipper and push until the parts engage fully. Then install the M5 locknut.
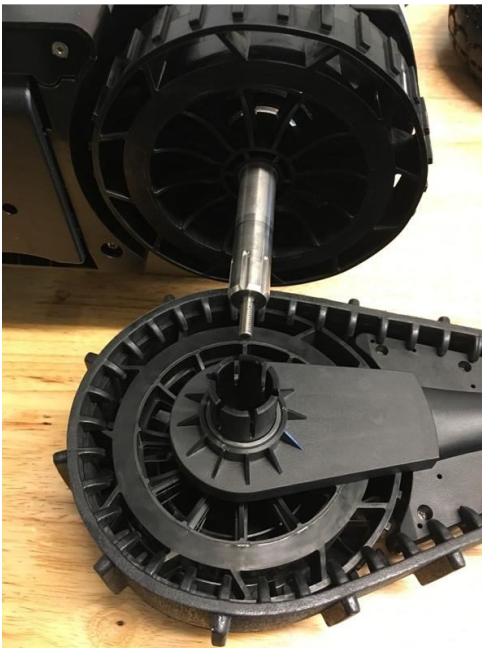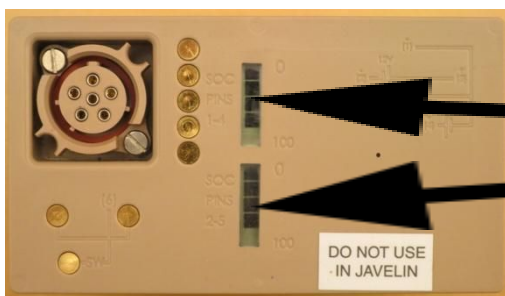
2) Battery

A) Charging the Battery Outside of the Robot

- After removing the battery from the Open Rover, align the charger and battery connectors and plug the adapter into an AC wall outlet.
- Battery is fully charged when the indicator on the top of the battery shows 5 full black bars, or when the indicator light on the top of the charger turns green (if you choose to, it is alright to leave the battery on the charger).
- To check charge levels, you can refer to the charge indicator on the battery itself, which will tell you how much charge is left. You can also look at the on-screen controller indicators (see page 12).

These are the indicator bars. The dark bars reflect the amount of charge in the battery. Five black bars mean the battery is fully charged. When no black bars are present, the battery is empty. The battery in this picture shows a battery with just under a full charge.