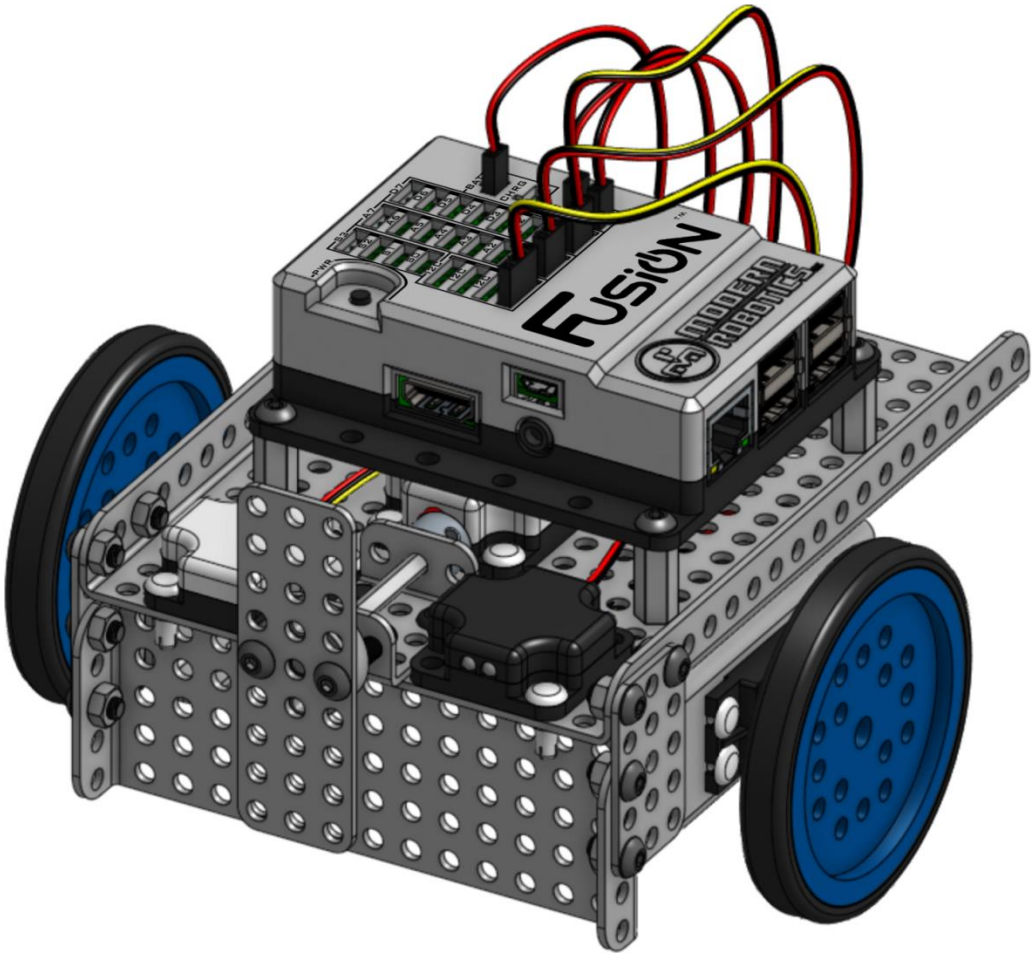
BOXLIGHT®
robotics

Modifying the Legacy BaseKit to add the Planetary Exploration Pack



Version 1.2
Boxlight Robotics

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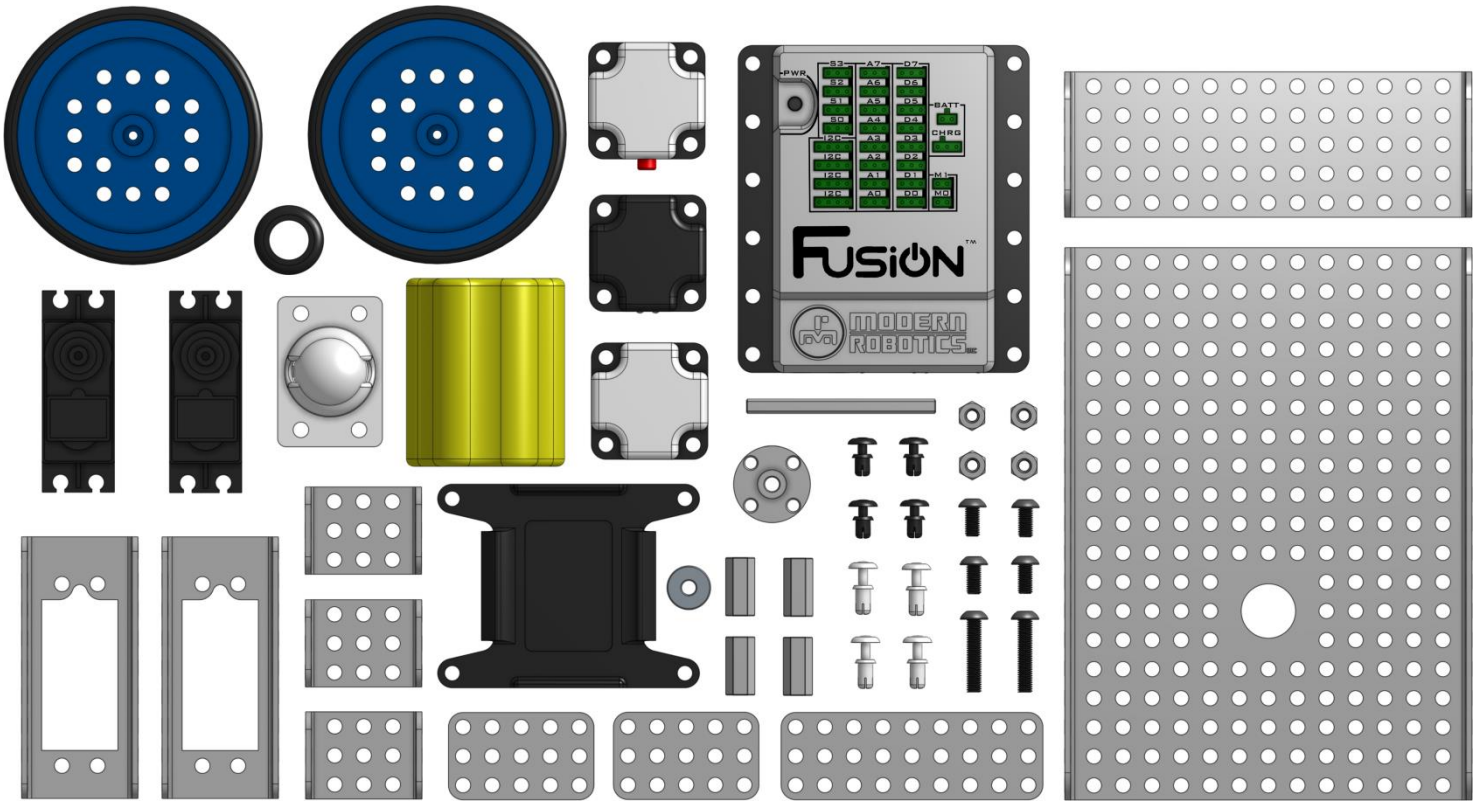


Legacy BaseKit Update Instructions

These instructions describe how to modify the original Robotics/MyBot Base Kit to accept the Planetary Exploration Sensor Pack.

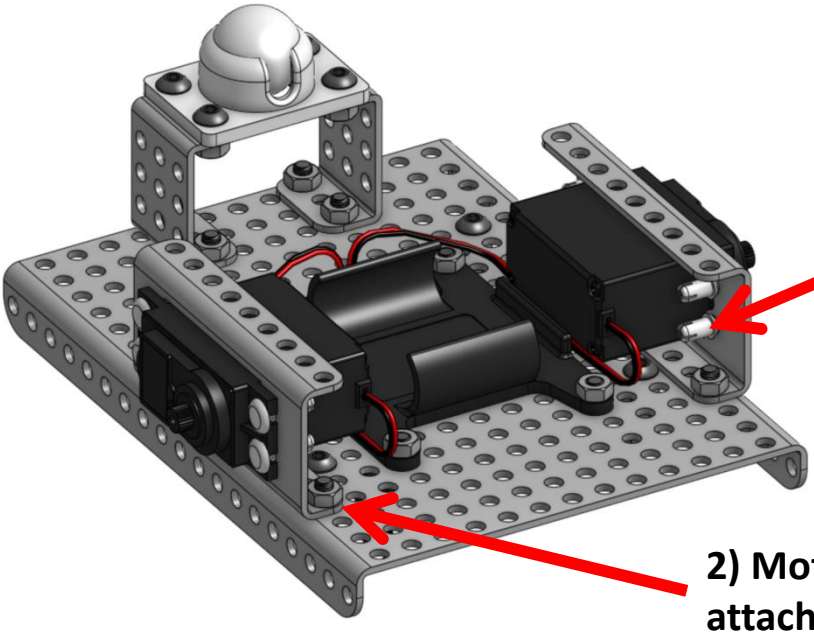
Please see the information on the next page to help identify if your robot was built using the original Instructions.

Note: Specifications listed are subject to change without notice.

Legacy Build Identification Guide

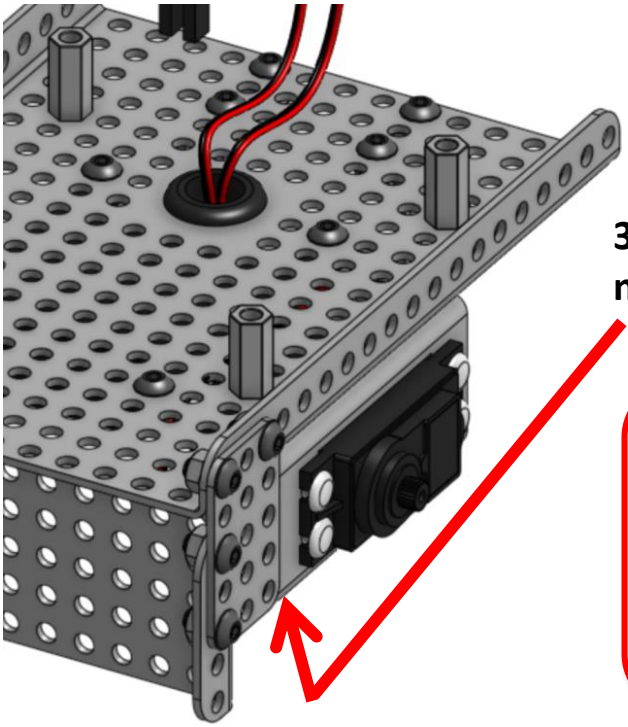
The original build can be identified through several clues:

1. The motors are attached to the mounting plates using white plastic fasteners.
2. The motor mounting plates are attached to the robot's base plate using screws and nuts.
3. The motor mounting brackets *touch* the 3x5 plates that are used to mount the front bumper (or cow-catcher).



1) Motor attached with white plastic fasteners

2) Motor mounting plates attached with screws and nuts



3) No 'gap' between motor mounts and 3x5 plates

If there is not gap of about 8mm between the motor mounting plates and the 3x5 plates, you will need to move the motors back by one mounting hole as shown following the Illustrated List of Components.

Illustrated List of Components Needed

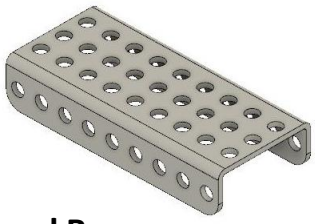
Extra components from the original Base Kit Build

x2
11-6001
Quick Connect Short

x4
11-6002
Quick Connect Medium

New components in the Planetary Exploration Pack

X1
06-0009
9 Hole C Shaped Beam



X1
45-2018
Color Sensor

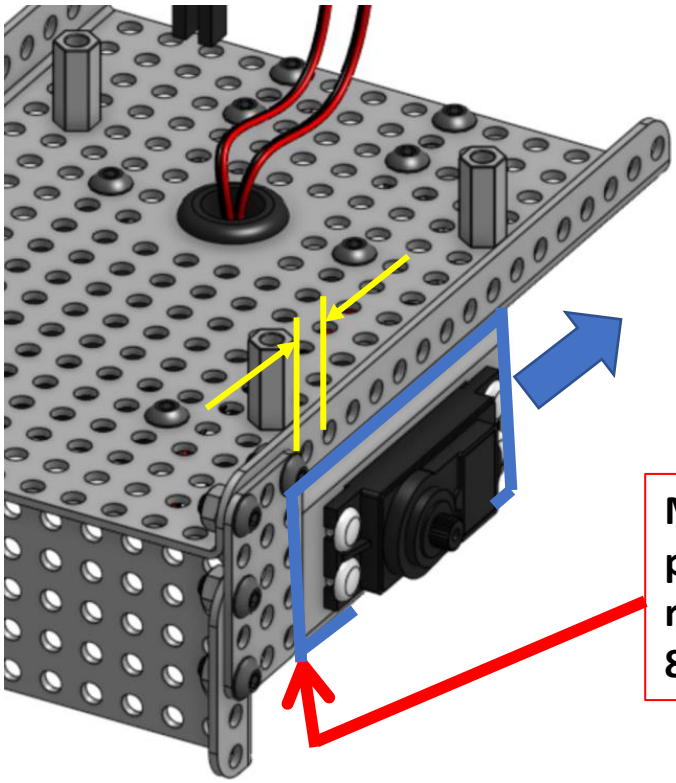
X1
45-2020
Magnet Sensor

1

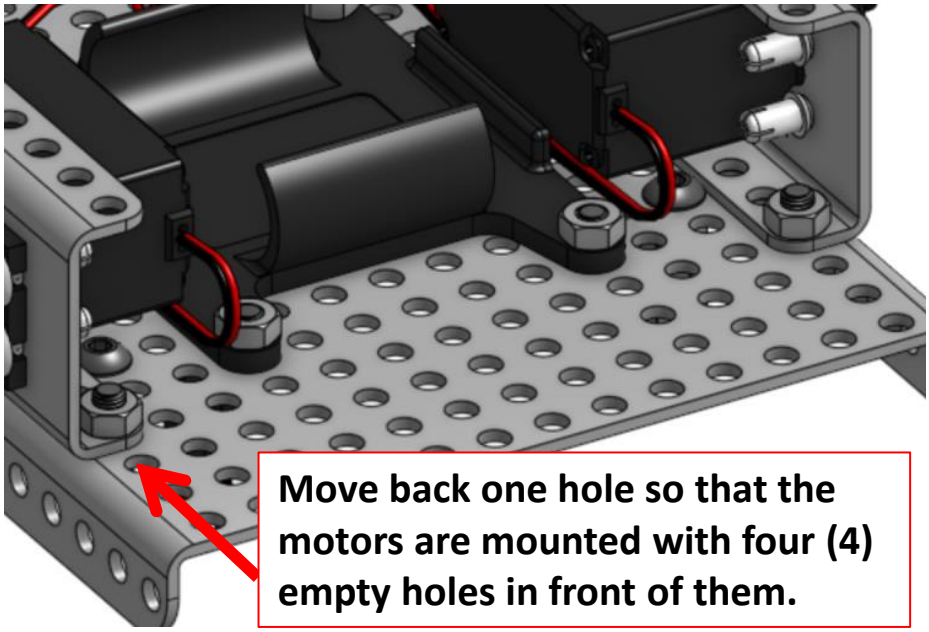
Move the Motors Back by One Hole

In order to allow the new sensors to be mounted, it is necessary to move the motors and their mounting plates *back* by one hole.

This creates a gap between the motor mounts and the 3x5 plates used to mount the front bumper (or cow-catcher).



Move the motor mounting plates towards the back of the robot by ONE hole, creating an 8mm wide gap here.



Move back one hole so that the motors are mounted with four (4) empty holes in front of them.

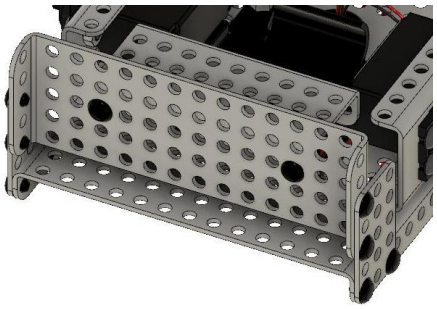
For each motor mounting plate, loosen and remove the screws, carefully slide the unit back by one hole, and reattach using the screws and nuts.

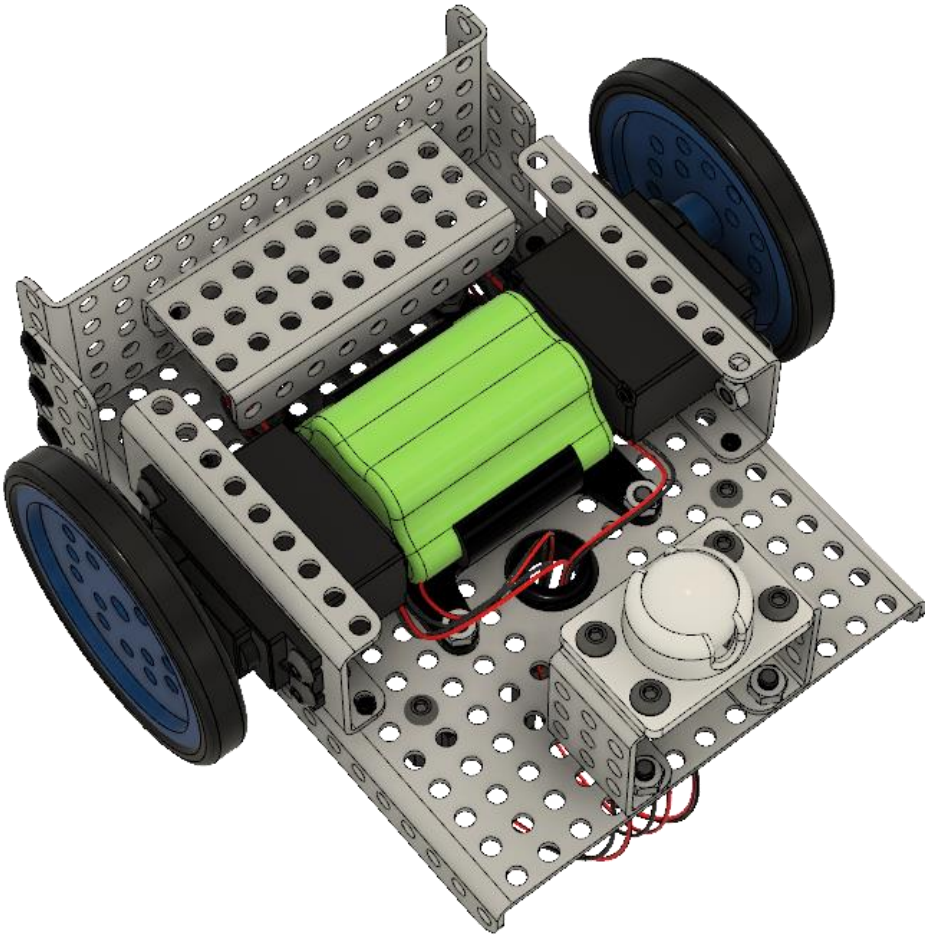
When complete, you will have four (4) empty holes in front of each motor unit.

2

x1

x2



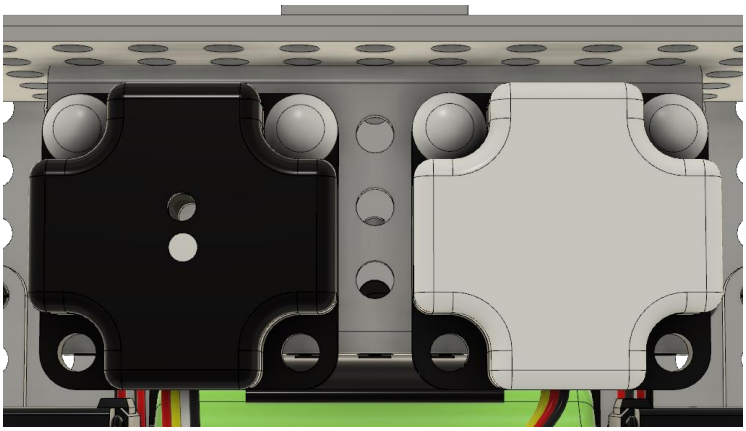


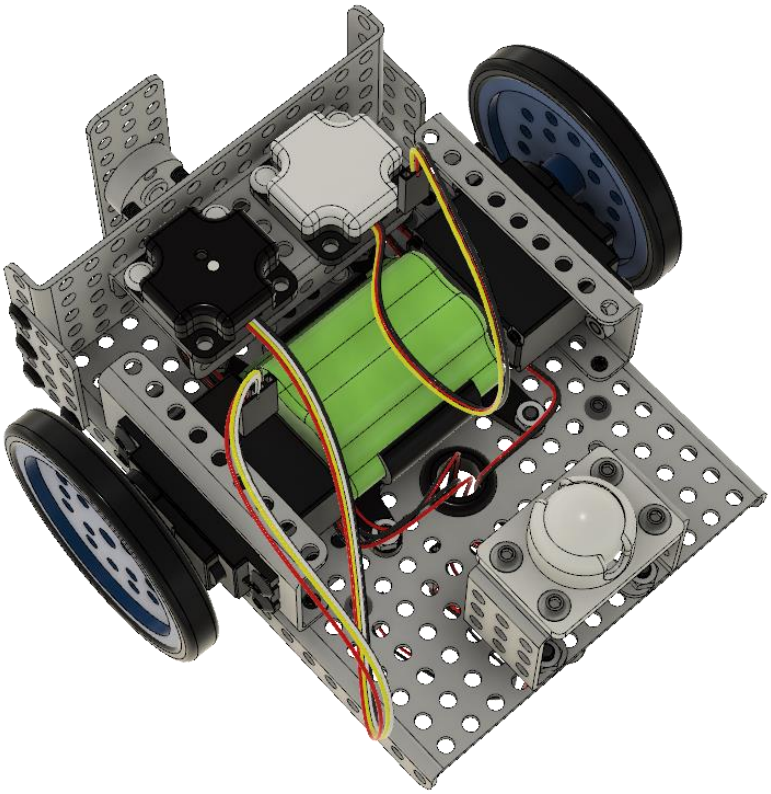
3

x1

x1
(Magnetic Field Sensor)

x4





4 – Wiring

Optical Distance Sensor → Y R B **A0**

Magnetic Field Sensor → Y R B **A1**

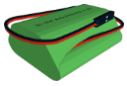
Touch Sensor → Y R B **D0**

Color Sensor → R Y W B **I2C**

Integrating Gyro → R Y W B **I2C**

Left Motor → R B **M1**

Right Motor → B R **M0**



Battery → R B **BATT**